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ORIGINAL ARTICLES

END-TO-END ANASTOMOSIS OF THE ABDOMINAL AORTA, USING ABSORBABLE MAGNESIUM RINGS *

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The surgery of the blood-vessels is the oldest branch of all surgery. It begins with the first dawn of surgery and has always excited the interest of the entire profession. On serious thought one of the most delicate, timely and awe-inspiring physiologic phenomena is the clotting of the blood. This phenomenon has baffled all attempts at blood-vessel repair up to the present time and even now is the cause of most of the failures in blood-vessel work. The problem of blood-vessel repair in this day of asepsis has simmered down to the prevention of thrombosis. As is well known, fibrin ferment is formed by injuries to the tissues but particularly by injuries to the blood-vessel walls themselves, the lymphoid tissues, namely thymus, bone marrow and thyroid and the pure lymphatic tissues, namely the lymph glands. In any wound fibrin ferment is present in large amount and in reparative blood-vessel operations it must be prevented from acting or removed.

The conditions necessary for the healing of wounds are acute coaptation, careful hemostasis, asepsis, absence of tension and physiologic rest. In blood-vessel wounds the first three of these rules must be much more carefully observed than in wounds of any other structure. Hemostasis must be excellent; all bleeding points must be clamped or ligated. Infection must be absolutely prevented in blood-vessel work. As is well known, if infection is present in a wound, in direct proportion to its amount and virulence, healing is retarded, the sutures cut out and your wound opens up. If this wound happens to be in the femoral artery, for example, you will have a very busy few moments and your patient is fortunate if he survives. Unfortunately, the fourth and last condition for ideal wound healing cannot be fully observed and is a very frequent cause of failures. The

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unavoidable tension of blood-vessel wounds is of two kinds: first, a longitudinal pull; second, a circumferential pressure which is equal to the blood-pressure. The longitudinal pull is operative only in wounds at an angle to the longitudinal axis of the vessel. It is greatest necessarily in wounds that completely sever the vessel and diminishes proportionately

Figure 1

Figure 2

Plate 1.—End-to-end anastomosis of abdominal aorta. Operation April 28, 1910. Dog anesthetized Aug. 8, 1910, 102 days after operation. Aorta exposed and could be seen and felt to pulsate through the line of anastomosis. No gas in the tissue; magnesium absorbed; no constriction and no aneurysm. In the lumen of the vessel was a lateral thrombosis covered with intima except for its extreme tip.

Plate 2.—End-to-end anastomosis of abdominal aorta. Operation May 12, 1910. Dog killed Aug. 20, 1910. Dog was anesthetized and vessel exposed; both iliacs were seen to pulsate; no gas in the tissue; a few small pieces of magnesium still in the tissues. Lumbar gland markedly enlarged. On opening the vessel it shows a fine union, no clot, no stricture, no thrombi and no aneurysm.

as the wound involves less and less of the circumference of the vessel. This pull is due to the natural elasticity of the blood-vessel walls. This

factor is present and remains under all circumstances. It can be much influenced, however, by posture, and in all end-to-end union of blood-vessels the part should be placed and fixed in the position that will relieve this pull as much as possible. The circumferential pressure is operative

Figure 3

Figure 4

Plate 3.—Operation May 9, 1910. End-to-end anastomosis of the abdominal aorta. Killed Aug. 18, 1910, 102 days after operation. Aorta exposed; both femorals could be seen pulsating; glands slightly enlarged; magnesium practically absorbed; no clots, no stricture, no aneurysm and no gas in the tissues.

Plate 4.—End-to-end anastomosis of the abdominal aorta. Dog killed three months after operation. No interference with the circulation in the hind legs. Femorals both pulsating; no aneurysm and no constriction; magnesium rings absorbed; no gas in the tissues.

in all wounds both circular and longitudinal and is equal to the blood-pressure in that particular vessel. The only way to influence this force

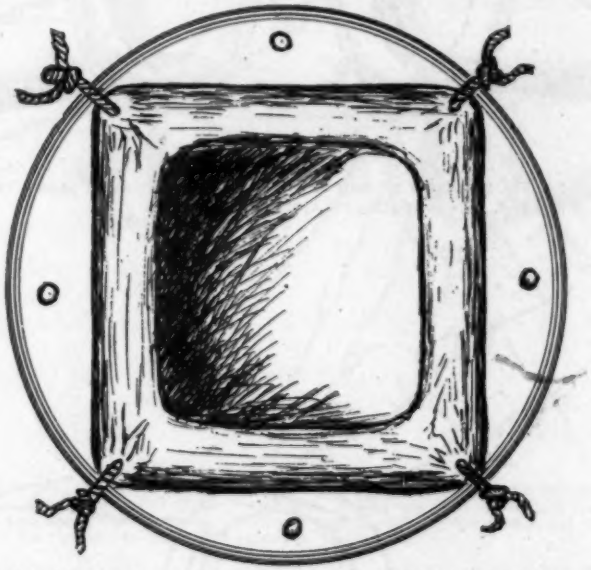
is to lower the blood-pressure. This can be done possibly by posture, as elevating the extremities, but the use of drugs for this purpose I do not think advisable.

I wish to report on fifteen end-to-end anastomoses of the abdominal aorta done on dogs. Chloroform anesthesia was used. An abdominal

Plate 5.—End-to-end anastomosis of the abdominal vena cava, 89 days after operation. Note the complete absorption of the rings, the absence of gas, no constriction and smooth line of union.

incision through the median line was made, the abdominal cavity entered and the aorta exposed. The peritoneum was torn through, the inferior mesenteric artery caught and ligated as were also the lumbar arteries. In exposing the aorta care was taken not to injure the thoracic duct or

any of its large collaterals coming up to form the receptaculum chyli. In several of our cases these structures were injured; at least a certain amount of milky fluid flooded the wound. This was simply sponged away and the animals recovered just as well as the others. The cords of the sympathetic were exposed in all and whenever they interfered with the operative field were cut. Occasionally some branches of the vena cava crossed the field of operation; if so they were cut and ligated. After freeing the vessel from its bed for approximately 1 to 2 inches, the diameter of the vessel, as the blood was flowing, was accurately determined using a millimeter gauge. In these experiments the diameter of the abdominal aorta varied from 5 to 7 millimeters. Next the clamps were

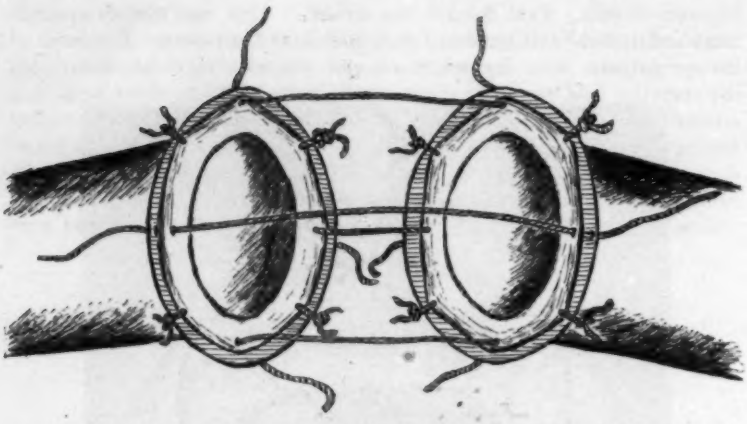


Method 1, Fig. 1.—Shows the fourth stitch passed and tied and the lumen of the vessel is now quadrangular.

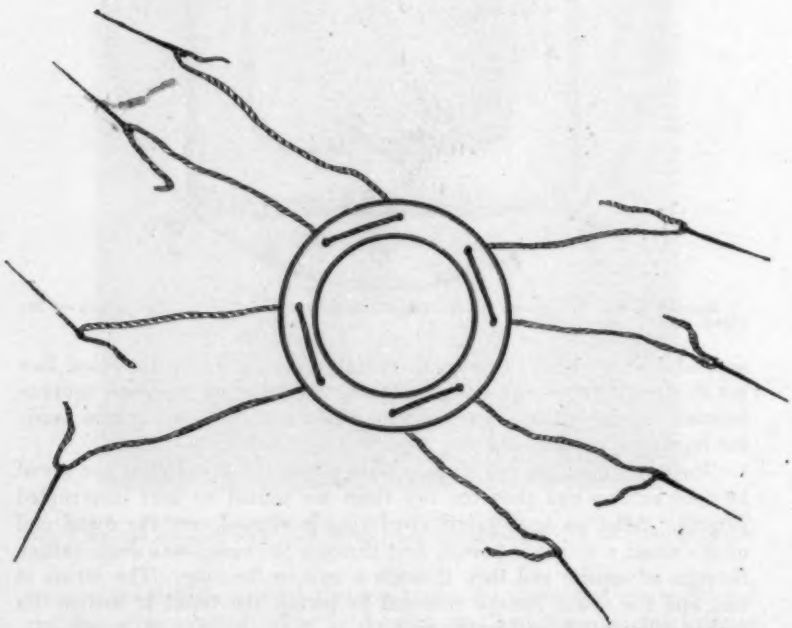
applied, being careful to clamp them tight enough to stop the blood flow but still not tight enough to injure the intima. Section the vessel midway between the two clamps, wash out the blood and the vessel is now ready for repair. Two methods were used in making this anastomosis.

Method 1 employs two rings, within which the vessel ends are sewed by four sutures and then the two rings are united by four interrupted sutures. After an appropriate sized ring is slipped over the distal end of the vessel a suture is passed, first through the vessel wall from intima through adventitia and then through a hole in the ring. The suture is tied and the tissue forceps removed to permit the vessel to assume its proper relationship within the ring.

A point on the vessel wall is then determined which is directly opposite to this first suture. At this point a second similar suture is passed



Method 1, Fig. 2.—Shows all four of the approximating sutures passed, ready to be drawn up and tied, thus completing the operation.

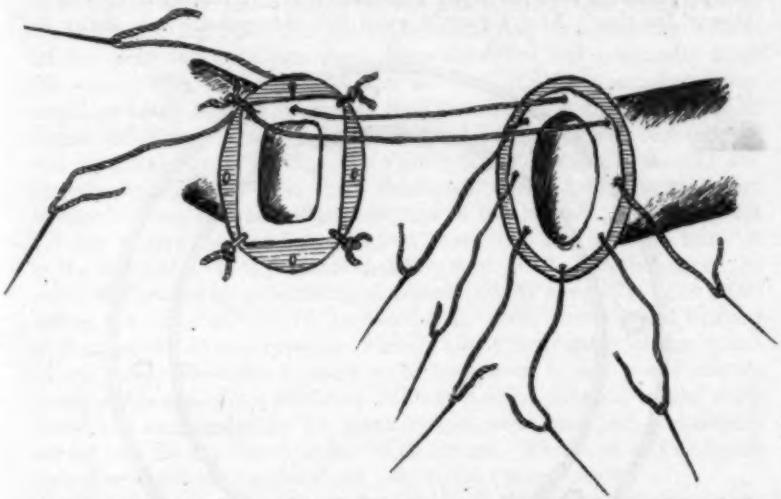


Method 2, Fig. 3.—Shows the ring threaded with the four mattress sutures.

through all the coats of the vessel and then through the appropriate hole in the ring. The suture is drawn up and tied. The location of the third suture is determined by bisecting the vessel wall between the two previously passed sutures and passing a suture through the vessel wall and through the appropriate hole in the ring. Then this suture is drawn up and tied.

The fourth suture is passed on the opposite side of the vessel exactly as the third was passed; after it has been placed and tied, you have the vessel lumen assuming a quadrangular outline (Fig. 1).

These sutures should be of triple O silk and the knots should be placed



Method 2, Fig. 4.—Shows both ends of the vessel. All of the mattress sutures have been passed through the walls of one vessel end. A ring has been sewed into the other vessel end and one of the mattress sutures has been passed through this vessel end and ring. Note the two sutures using the same hole in the ring.

on the edges of the ring so as not to interfere with the coaptation of the rings when they are finally brought together.

Next the four approximating sutures are passed first through one of the unoccupied holes of the ring and then through the everted flap of the vessel end from without in; then across to the opposite vessel end when the needle penetrates the vessel flap from within out, and finally passed through the hole of the second ring. Four of these sutures are passed.

In Figure 2, we see all four of these interrupted sutures passed, each suture including within its grasp both vessel ends and the two rings. When these four sutures are drawn up and tied the operation is completed.

Method 2.—In this method two rings are used, one of which is threaded (Fig. 3) and the other is sewed into one of the vessel ends as in Figure 1. First the threaded ring is slipped over one vessel end and suture 1 is passed through the vessel wall from outside in. Next the suture

diametrically opposite to 1 is taken up and passed through the vessel wall at a point exactly opposite to suture 1.

Traction is now made on both of these sutures. This force draws the vessel up into the ring and everts it slightly over the ring. Suture 3 is now picked up and passed exactly in the center between sutures 1 and 2. The assistant now drops suture 2 and grasps No. 3. Traction is made on sutures 1 and 3, and suture 4 is grasped and passed exactly half way between Nos. 1 and 3. Suture No. 1 is now dropped and suture No. 2 is taken up, traction is made on 2 and 3, and suture No. 5 is passed just midway between Nos. 2 and 3. Sutures 6, 7 and 8 are now passed in a similar manner; thus the vessel is everted out over the entire circumference of the ring. Next a ring is sewed into the opposite ends, using the

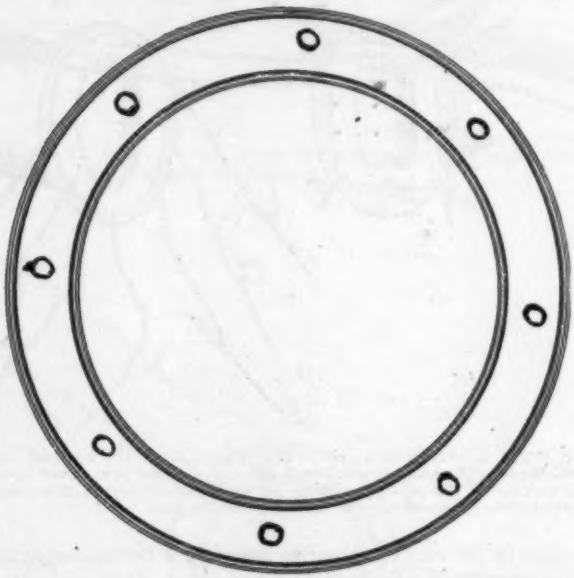


Fig. 5.—The absorbable magnesium ring used in making all these anastomoses.

same technic as in Figure 1. The next step is to pass suture No. 1 through the everted vessel ends from inside out and through the appropriate hole in the second ring; then suture 4 is passed in the same manner and we have the picture shown in Figure 4. Then the remainder of the sutures are passed in their appropriate places, care being taken that they do not become crossed or the vessel twisted. After all of the mattress sutures are passed and the vessel is washed out, the sutures are drawn up and tied, and the operation is completed.

After the approximating sutures are placed and they are ready to tie, wash out the vessel ends thoroughly with saline solution; then ventral flex the dog to relieve the longitudinal pull on the sutures as much as possible while they are being tied, sew the vessel sheath and the perito-

neum over the line of union, then sew up the anterior abdominal wall. The time of interruption of the blood stream varied from twenty-five minutes as the maximum on the first case operated on to sixteen minutes. Our record with several was nineteen minutes. Fifteen end-to-end anastomoses of the abdominal aorta were done with a mortality of eight, or 53 per cent. Of these eight, seven died of shock or infection and one of hemorrhage due to an abscess around the line of union in the artery. Thrombosis in some form occurred in four cases or a percentage of 26.5 per cent. One of these cases was perfectly healed over and the entire thrombus except its very tip was covered with intima. One of the other cases was an early case before I became aware that it was possible to tie the suture too tight and that the edges of the ring could cut the intima. Of the other two cases one was a large thrombus and practically filled the vessel. The other was a smaller one and in view of our experience would probably have been covered with intima if the animal had lived. Hence including all cases the percentage of thrombosis was 26.5 but the real practical percentage I think should be 6.6 per cent., as only one thrombus plugged the vessel so no blood could pass. A definite aneurysm occurred in one case and slight bulgings in two others. These bulgings did not involve the scar but were just above it in one case and below it in the other two. It is probable that they were due to a weakening of the vessel wall caused by a too thorough removal of the adventitia, thus interfering with the nutrition of the vessel wall. Stricture occurred in none of these cases. Clamp pressure caused a slight roughening of the intima in one case. The special points to be considered in end-to-end anastomosis of the abdominal aorta are its deep position overlaid by the small bowel and surrounded by the thoracic duct, vena cava and sympathetic nerves, and the extreme friability of its intima. This is as soft as American cheese and can be picked off with tissue forceps easily.

This research was done in the Laboratory of Experimental Surgery of the Northwestern University Medical School.

THE TREATMENT OF SUPPURATIVE INFECTIONS OF THE PLEURA AND LUNGS*

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This is a very large subject, one which occupies large space in every good text-book of medicine and surgery. While pulmonary surgery dates back to the time of Hippocrates, it was not until after 1600 that even the trocar and canula came into use. The subject fell into abeyance until 1859 when surgical drainage was introduced by Chassaignac. In 1869 Potain applied the siphon tube to evacuate the cavities of empyema through a trocar and canula opening. In 1872 Playfair introduced a siphon drainage by means of a long tube resting in a vessel of water, later

* Read before the North Shore Branch of the Chicago Medical Society, Feb. 7, 1911.

arranged to permit of ambulatory treatment. This was one of the first continued drainage appliances. In 1873 Mosler attempted to cure pulmonary abscesses by intra-parenchymatous injections of antiseptics. In 1874 Tachard, and in 1880 Ravilliod, each independently reported the use of permanent siphonage after pleurotomy. In 1881 new impetus was given to the subject by Gluck. Hans, Schmidt, Block and Biondi made similar experiments and these collectively laid the scientific and technical foundation of modern lung surgery. In 1882 Bull reported a series of cases of lung abscess which had been healed by operation. Since then the field has been extended so that now it includes the treatment of abscess, gangrene, echinococcus neoplasms, actinomycosis, drainage of bronchiectatic and tubercular cavities as well as the removal of foreign bodies. In the last few years the subject of septic pulmonary infections has received a great deal of attention and notwithstanding all the favorable reports that have been published on the subject, I find there is still a pronounced hesitation on the part of many practitioners and surgeons to operating on these conditions.

The organisms concerned in these infections are the streptococcus and staphylococcus or both. The bacilli of Fraenkel or Friedlander, pneumococci, are frequently found as well as the influenza and colon bacillus.

In the short time allotted to this paper it will be impossible for me to take up all the various phases of this extensive subject. In order, therefore, that I may bring out the chief points of the more commonly met with phases of the subject, I will confine the paper to the treatment of the lung and pleura as follows: (1) treatment of acute empyema; (2) treatment of abscess of the lung; (3) treatment of gangrene of the lung; and (4) treatment of infection due to penetrating wounds of the pleural cavity or lung.

Empyema or pyothorax is an accumulation of pus in the pleural cavity. It is usually the sequela of recent inflammations of the lung and pleura principally or secondary to suppurative inflammations in distant organs, as for instance an abscess in the pancreas, liver, kidney or vermiform appendix. It may be due to rupture of a subphrenic abscess into the pleural cavity or occasionally it may be due to a rupture into the pleural cavity of an abscess occurring in the rourse of a Pott's disease of the spine. Again, it may be caused by an extension of an inflammation of the pericardium either septic or otherwise. In this disease it is important to make the diagnosis early. The diagnosis made early and drainage employed, recovery is comparatively short and as a rule complete. The greatest difficulty in making a diagnosis in these cases will be met with in children, primarily on account of the pneumonia which caused the empyema and again on account of the lack of careful diagnostic methods. Early diagnosis and early operative drainage gives as a rule complete result. The trocar must be used more often and earlier in children than in adults. While auscultation and percussion tell whether fluid is present, to make the diagnosis of empyema, aspiration alone can tell whether pus is present. In this connection we might say that the aspirator has its place in making the diagnosis but it has a very limited use in treatment.

We know that some cases of pneumococcal empyema are cured by aspiration. The majority of them, however, are cured not by aspiration but by drainage.

The surgical treatment of empyema consists of evacuation of the pus by incision with or without resection of parts of one or more ribs. Large accumulations of pus in the pleural cavity present a very serious condition and are accompanied by a very high mortality unless treated with the greatest care. In acute septic pleurisies when the cavity has filled rapidly the operation of rib resection should never be done at the outset, as the mortality rate in these cases is very high. It is better to aspirate first which will relieve the urgent symptoms. Following the aspiration the patient should be placed in a sitting position. This permits the remaining fluid to become walled off in the lower part of the chest. Later this can be treated by a free incision or, if thought necessary, by exsection of a rib and free drainage.

I use the words "if thought necessary" advisedly for I feel that many physicians are unnecessarily exsecting ribs in cases of empyema. I have had quite an experience with purulent effusions in the pleural cavity and only in a very small minority of cases have I found it necessary to exsect ribs. I believe we can almost always get speedy and perfect results by making a free opening between the ribs at the proper place and draining. Since I have adopted the plan (in large acute empyemas which involve the greater part of the pleural surface, the lungs being crowded upward, without any apparent walling off by adhesion) of aspirating to relieve the urgent symptoms and placing the patient in a sitting or semisitting position, thus permitting the pus or fluid to gravitate to the lower part of the chest where they become walled off by adhesions, my results have been far better than when radical operation was done at the outset. In this way I have succeeded in several cases in walling off the pus, transforming a diffuse septic pleurisy into a circumscribed empyema, which was operated on successfully by free drainage in most cases and in a few by rib resection a few days later.

A positive diagnosis having been made, the parts should receive a thorough aseptic preparation. In the acute rapidly filling form referred to only local anesthesia is necessary and for this purpose a few drops of a 4 per cent. solution of cocain in a 1 to 4,000 solution of adrenalin chlorid is all that is necessary. Select a point, usually the sixth interspace in the axillary line, inject about 10 drops of the solution, allow about four or five minutes to elapse, then insert the trocar and withdraw the stilet. When the cavity is apparently emptied and the trocar is withdrawn the patient is put to bed with the shoulders elevated to promote the gravitation of the remaining fluid into the lower portion of the chest where it will become walled off in a few days, when the operation of resection if necessary can be more safely performed.

The operation of free drainage or exsection of one or more ribs in circumscribed empyema is not difficult. If the patient is weakened by prolonged sepsis or if a large accumulation of fluid causes difficulty in breathing or a rapid and weak pulse, it is safer to operate under local

anesthesia; on the other hand, if the patient's condition is not serious I prefer a general anesthetic. The location for the incision will be determined by the location of the pus; in all cases the opening should be made at the lowest point of the empyema so as to secure as far as possible perfect drainage. In cases where ribs are to be excised they should be exposed, the periosteum incised and dissected back for a distance of two or three inches. The rib resector is now brought into play and about two inches of the rib removed, always remembering to avoid wounding the intercostal artery. The next step in the operation is the opening of the pleural cavity, again remembering to avoid wounding the intercostal vessel. This is done by making the incision in the center of the space and parallel to the vessels; if this precaution is followed there will be no danger of wounding the intercostal vessel; the incision in the pleura should be large enough to admit easily of an examination of the abscess cavity by at least two fingers. By the use of the fingers the outlines of the cavity should be determined if possible. In attempting to determine the limits of an abscess cavity occasionally more than one pus cavity will be found to exist. On one occasion when trying to determine the limits of a pus cavity I succeeded in breaking down the adhesions into a second cavity thus connecting the two cavities into one. In this way it may be possible to avoid making a second opening through the chest wall. By percussion after having emptied one abscess you may be able to locate a second and it may be found necessary to make a second opening into the chest wall. In certain large persistent empyemas it may be necessary to exsect two, or perhaps in some cases, three ribs in order that plenty of room may be had for thorough examination and cleaning out of the abscess cavity.

Perfect drainage can be established by passing two or three large sized drainage tubes about three inches long into the cavity; the outer end of the tubes being transfixed with large, sterile safety pins to prevent them being lost in the abscess cavity. These can be held in position by placing gauze packing about them.

Irrigation in these cases is worse than useless; in fact it does harm, for it is often followed by high fever and other symptoms of toxic absorption. When patients are not doing well after operation the trouble is usually due to inefficient drainage and if this feature is remedied, subsidence of the bad symptoms almost invariably takes place.

For facilitating expansion of the lungs following operations for empyema many devices have been invented to prevent the entrance of air into the pleural cavity. Usually the ordinary tight dressing we use is air-tight as soon as the inner layers are wet. A little air or pus is forced out on expiration and the dressing acting as a valve holds it out, then the lung expands a little to fill up the space. This sort of dressing is sufficient as a rule in early cases. In old cases which do not expand in this way, artificial methods to promote expansion have to be resorted to. Animal experiments have demonstrated that the compressed lung by fits of coughing and other expiratory efforts with a more or less closed glottis fills itself with air from the sound lung. If, therefore, intra-

pleural pressure can be removed, the lung rapidly expands. A study of the healing cavities in empyema shows that they close much more rapidly from side to side by lung expansion than from above downward, and because of this fact lies the danger of pocketing and retention by unequal expansion. In delayed sinus healing unequal lung expansion may so shut off the tract as to interfere with proper drainage. In a lung long compressed by purulent exudate the adhesions may be so dense and the exudate so thick that in some cases the lung never expands under simple drainage. Such a lung needs, in addition to pressure from within, the establishment of a decided negative pressure.

The length of time the lung may be compressed and still again expand is indefinite. A case is on record in which after a period of three years of pus in the chest with an imperfectly drained large cavity communicating with the bronchus the lung was made to reexpand and fill the side of the thorax. The amount of negative pressure required to overcome spastic contraction of the lung itself is slight. Ten millimeters of mercury will keep a normal lung expanded and two or three times this amount is usually sufficient for expanding a lung in cases of empyema. A lung that is adherent may stand a higher degree of vacuum but the constant effect of even so small an amount as that above mentioned seems efficient in time. The following is a very simple and effective procedure that will bring about this result:

After the establishment of simple drainage or the exsection of the rib and after the escape of the major part of the purulent material, substitute a single tube of about 40 French caliber for the two or three rubber drainage tubes inserted at the time of the primary operation. About the tube pack borated gauze saturated with an antiseptic ointment; take a piece of dentist's rubber dam about 5 or 6 inches square, cut a small hole in the center, stretch it over the tubing and run it down to the side of the chest; bind this in position by strips of adhesive plaster; over this place absorbent cotton, then a chest binder put on with the tube coming through. Into the rubber tube insert a glass connecting piece and on the other end a smaller piece of tubing about 6 or 8 inches long which connects with a Politzer bag. The use of a collapsible rubber bag is all that is necessary in most cases to make the treatment a distinctly simple and ambulatory one; the patient can be up and out of doors as soon as he is able to leave the bed. At the same time he is receiving the benefit of continuous aspiration drainage. The Politzer bag can be carried under the clothing and emptied and replaced by the patient as required.

Of the many devices made to secure an air-tight joint at the chest the above has been found the simplest and the most inexpensive, and will frequently last for weeks without leaking. The dressing should be changed once a week, at which time the depth of the vertical cavity or sinus should be noticed, as well as the amount of lung expansion. Frequently at this time the lung will be found to be in contact with the tube, when it will be necessary to shorten the tube. By repetition of this once a week the tube is gradually removed as the cavity is obliterated. The

routine employment of this method in cases of empyema will make operations like Estlander's, Schede's and others done with the same purpose, I am sure, exceedingly rare.

The method devised by Perthes is more cumbersome and will not permit of ambulatory treatment. It is on the plan of an ordinary exhaust or water pump. The principle involved is that a tube inserted in a downward direction into another tube through which water is flowing is under the influence of constant suction. The tube in the chest (before mentioned) is connected with the water pump just described, which may be 30 or 40 feet away from the patient. The stream of water required will be found to be surprisingly small (one-eighteenth to one one-hundredth of an atmosphere). The first tube is passed through an air-tight bottle which collects the pus. By this method striking results are often obtained; lungs which by the old method expanded slowly will expand more rapidly, and many cases have yielded by this treatment in which it was necessary previously to perform extensive destructive operations on the chest wall in order to bring it into contact with a shrunken lung.

Failing in this method of treatment in old empyemas we should resort to Estlander's operation which consists of resecting ribs and allowing the soft parts to fall in contact with the shrunken lung. Schede has shown us that it is the old thickened pleura which causes the delay in healing and that makes it necessary to repeat the operation several times before final recovery. In doing a Fowler's operation Ramschoff noted that an incision carried through a thickened pleura to the lung widens out rapidly, as will any subsequent number of incisions that may be made. He recommends making incisions like a gridiron about a quarter of an inch apart and crossing them by others. Following this the lung begins to expand at once. Magie advises going one step further by removing the parietal pleura and making multiple incisions in the thickened pleura of the lung.

In the treatment of abscess of the lung it should be noted that internal therapeutics is valueless in preventing progress of the disease, loss of strength and perforation of the pleural cavity by pus, or the prevention of metastatic processes and a final termination in chronic abscesses. No doubt some cases originating in pneumonia recover after evacuation without surgical intervention but it is seldom that drainage through a bronchial tube is sufficient or sufficiently prompt to avoid extensive destruction of lung tissue. In the absence of the gangrenous element the abscess may not enlarge rapidly nor cause marked septic symptoms. Its walls not having become indurated coalescence after discharge of pus, and cicatrization, may be prompt and complete; on the other hand we cannot be at all sure that this favorable result will follow as these abscesses are often near the pleural surface and may easily give rise to empyema, which in such cases runs a severe and protracted course.

We have as a result of delayed evacuation of the fluid a rapid breaking down of lung tissue, a thickened unyielding fibrosed abscess wall that is slow to contract and which resists extensive operative procedures. I

wish to impress on you the fact that suppuration of the lung is always a dangerous condition and is an indication for the early removal of the pus, which may rupture into a bronchus, into the pleural cavity, or give rise to multiple abscesses of the lung or cause general septic manifestations.

Spontaneous cures should be looked on as fortunate accidents and not waited for at the risk of the patient's life or future condition of health. The fact that a number recover spontaneously is not sufficient reason for the reservation of operative interference as a last resort. It has been found that early diagnosis and speedy operation give the best results; but when the abscess has already broken into a bronchus and is discharging freely it would seem proper to wait a time for Nature to finish the cure. Should the discharge of pus by mouth not diminish rapidly, and the septic symptoms continue, we should not delay long. Evidence of a gangrenous nature on the part of the abscess calls for early operation; the danger here is greater of infecting other parts of the lung and causing general sepsis. Other reasons justifying some delay in operating are the persistence of acute pneumonic process and the desirability of having formed adhesions between the two pleural surfaces. These should not be allowed to weigh against early evacuation of the pus when there are well-marked indications for the same.

The prognosis in pneumonotomy depends on the variety of the abscess, its location, duration, whether adhesions have taken place between the two pleural surfaces, as well as on the age and general condition of the patient. Abscesses due to pneumonia, suppuration of echinococcus cysts, and those following wounds are the most favorable. Abscesses of origin other than pneumonia are less favorable. The prognosis is very unfavorable in metastatic abscesses and those occurring in connection with bronchiectasis. In tuberculosis about 50 per cent. recover from operation but later succumb to the disease; it is therefore of temporary benefit only. Embolic abscesses are frequently multiple, the primary foci being found elsewhere than in the lung. I had a case with four foci exclusive of the one in the lung; the lung abscess was successfully opened and drained. In influenza the abscess is apt to be multiple, due to breaking down of disseminated areas of consolidation. Of gangrenous cases those give best results which arise from bronchitis putrida or pneumonia.

In abscesses due to foreign bodies the prognosis is bad; we seldom find the foreign body, the abscesses become chronic and the patient dies of prolonged suppuration or pyemia. Most of the other bad results from operation for acute pneumonic abscess may be charged to non-recognition of the abscess and consequent delay in operating until the patient's condition has become too poor from sepsis to expect anything but a fatal outcome; or they may be due to multiple abscesses secondary to the original, or to some other complicating process. These bad results seem therefore nearly all avoidable provided that the case comes under the physician's observation from the beginning. After making a diagnosis the time to await before the operation depends on the size and location of the abscess

and on condition of the patient. If the abscess is small and is deeply situated in the upper part of the lung and the patient is in good condition, then waiting two, three or four weeks might be justifiable. If the abscess is in the lower or middle part of the lung where drainage would be more favorable operations should be promptly undertaken. In spite of the fact that the operative technic of pneumonotomy is comparatively simple the operation is often unsatisfactory and disappointments are not uncommon.

In the first place the abscess though present may not be found. This may be due to the fact that its location has not been made out accurately beforehand. It is one thing to diagnose the existence of an abscess of a lung and quite another to locate it exactly; mistakes are made as to height, depth, etc.

Case 1 illustrates very nicely the difficulties encountered at times.

Case 1.—Dated July 9, 1904; J. C., male, married, aged 44 years; occupation plumber; diagnosis, abscess of lung. Has been ill ten weeks; is weak and extremely emaciated; pulse 120; cough slight, harsh and brassy; constant pain in base of left lung. Another physician some four weeks before had made an exploratory puncture in the mid-axillary line in the fifth interspace and inserted the needle in different directions but was unable to locate fluid of any kind; a second puncture was made two weeks later with negative results; two weeks later a careful examination convinced me the man had a pulmonary abscess and I decided to make a preliminary puncture through the fourth interspace. The second insertion of the needle opened into an abscess cavity; two and one-half inches of the fourth rib were excised through the adherent layers of the pleura and an abscess of the upper lobe was broken into which discharged nearly a pint of pus; the temperature fell at once to normal, the walls of the abscess collapsed rapidly, and the wound was practically healed four weeks later. Then a chill, high fever, sweating and general prostration indicating that he must have an empyema below the sight of previous incision, I excised the rib previously operated on as well as the one below and evacuated a pint of foul smelling fluid. In addition at the location of the previous operation an encysted abscess was encountered and evacuated. Nearly complete collapse accompanied the operation but by the use of stimulants, etc., twenty-four hours later the patient was out of danger. Recovery was rapid with no perceptible deformity, the lung filling the thorax as evidenced by normal respiratory sounds in the region operated upon.

Bozy found a gangrenous focus in the upper lobe of the right lung when physical signs pointed to a localization of a cavity in the lower lobe. Better results from operation will follow more prompt recognition on the part of physicians of the existence of an abscess and more accurate diagnosis of the location of the same and from earlier operative intervention. The mortality at present is higher than it should be. It is probably not far from 50 per cent.

In making a diagnosis past experience will help us in the majority of cases. In failing to note the existence of adhesions of the pleural surfaces in exploring we overlook a valuable diagnostic method. The absence of adhesions carries with it considerable doubt as to whether the abscess will be found directly beneath the exposed pleural surfaces, inasmuch as adhesions are the rule and are present in over 80 per cent. of the cases. Again, experience has shown that the great majority of abscesses following pneumonia occur in the pleural surfaces of the lower lobe. Again, the

location of adhesions between the pleural surfaces is usually an important guide to the situation of the pus cavity. After exposing the adherent pleura the aspirating syringe should ordinarily locate the pus, if inserted a number of times in different directions and to various depths. A valuable diagnostic aid in abscess of the lung is the *x*-ray. Great precaution is necessary in its application, for at times the picture is misleading, as is sometimes the case in fractures, etc. In all cases both anterior and posterior and lateral photographs should be taken. The *x*-ray picture when studied in connection with all the symptoms and signs will enable us in nearly all cases to locate accurately the abscess cavity.

The treatment of abscess of the lung consists of free incision with resection of ribs, usually two or more, and drainage. The abscess having been located, a couple of ribs are resected in the same manner as for draining an empyema of the pleural cavity. After the lung pleura is exposed, if the abscess is superficial you will usually find the lung pleura adherent to the costal pleura. When this condition is present, incision can be made directly into the abscess cavity. In deep-seated abscesses there may be no pleural adhesions to guide the direction of the incision. In the absence of adhesions a small aspirating syringe can be brought into use, a needle passed in the direction of the suspected abscess, and if pus is found the abscess is easily located. If adhesions of the two pleural surfaces have taken place the incision can be made directly into the abscess cavity without fear, as the abscess under such conditions is usually located very near the surface. If the strength of existing adhesions is in doubt, suture should be used for reinforcement so that the introduction of scalpel or trocar will not cause the adhesions to give way, followed by pneumothorax and separation of the lung from the field of operation. If there is any doubt about the nearness of the pus to the pleura, the aspirating needle will be introduced in the direction of the suspected abscess. In the absence of adhesions of the visceral to the costal pleura, after the abscess has been located it will be well to stitch the visceral to the costal pleura. If suturing is done satisfactorily incision in the pleura can be done at once without putting it off to a second sitting. If the condition of the patient is good the delay of a couple of days will ensure stronger adhesions without lessening the patient's chances. Pack the wound with borated gauze two or three days later when adhesions have formed between the two layers of the pleura. Incision can then be made direct into the abscess without danger of infecting the general cavity of the pleura.

This method, however, is not universally adopted. Quincke operates in two stages: first, he secures pleural adhesions by cauterization with a paste of zinc chlorid, which he applies to the floor of the wound. After adhesions have formed he completes the operation. For this purpose the thermocautery is used; invasion is made slowly and deep into the tissue of the lung until the seat of the trouble is reached. This latter method has never appealed to me. I have always considered the chlorid of zinc paste as unsurgical and it strikes me it will not appeal to the aseptic surgeon.

Serious hemorrhage from the superficial part of the lung is uncommon but the larger vessels of the deeper parts are liable to bleed profusely. Should a complete pneumothorax and resulting collapse symptoms occur in spite of the precautionary measures already spoken of the patient may be saved by prompt measures. The lung may be seized with tenaculum forceps and drawn forcibly against the wound in the pleura and retained there by sutures. Further, the lung may be expanded by means of O'Dwyer's intubation tube. Should the pus be opened into the healthy pleura there is very great danger of a fatal empyema especially in a person already septic and weakened. An attempt should be made, however, to provide for drainage at the most dependent part of the thoracic cavity.

The incision into a lung abscess should be large enough to permit a thorough inspection of all solid masses. For the purpose of draining lung abscesses most operators prefer large rubber drainage tubes together with gauze. Gauze alone does not drain pus; it merely drains the liquid portions of the pus, leaving the solid portions behind. The rubber tubes are fastened in the same manner with safety pins as in empyema, to prevent their passing into the abscess cavity and becoming lost. The tubes should be kept in place until the cavity has become obliterated by healthy granulations. Abscesses communicating with the bronchial tubes should under no circumstances be irrigated until the granulating process has closed off the communication with the bronchus, as the fluids would pass directly into the bronchus and trachea causing strangulation. Here as in empyema irrigation should not as a rule be employed, as the danger of spreading the infection into adjacent tissues is a real one and fatal results have undoubtedly been caused in this way.

Acute gangrene of the lung is treated by rib resection and thorough removal of all gangrenous material with drainage, avoiding irrigation, which involves the same danger as in empyema. The same kind of drainage tubes with gauze packing are used in the treatment of cavities produced by gangrene of the lungs as are used in the treatment of abscesses of the lungs. These tubes should remain in position until the abscess cavity is entirely obliterated by healthy granulations. If the tubes are removed too soon the external wound heals very rapidly and may cause retention of pus in the granulating cavity producing fever and making it necessary to reopen the wound and insert drainage again.

Penetrating wounds of the chest wall or injuries to the lungs caused by fractured ribs often terminate in conditions that require surgical treatment. The symptoms denoting surgical treatment are symptoms of pressure or infection. The question arises in this condition as to the advisability of opening the pleural cavity by resection of a rib or by the more simple operation of aspiration. The operative opening of the chest cavity for the purpose of removing accumulations of blood has not proved very satisfactory. The mortality has been large owing to the fact that these accumulations are not walled off and that they become readily infected through the operative wounds. In some cases I have depended on simple aspiration with better results, removing all the liquid portions

of the blood, thereby relieving the urgent symptoms caused by pressure and depending on the final absorption of the clot. In case the clots become infected rib resection and drainage will be necessary.

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DIVERTICULA OF THE INTESTINE*

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In view of the fact that the abdomen is opened so frequently under the mistaken diagnosis of appendicitis, it is well that we should bring into prominence any intraabdominal affections which may simulate that disease, and have them prominently in our minds while making a diagnosis.

Every surgeon has made a diagnosis of appendicitis, and confidently opened the abdomen, only to find the appendix intact, and has had the mortification to look to some other viscus to account for the symptoms presented. The rôle which Meckel's diverticulum plays in intraabdominal symptomatology is fairly well known, but there are other diverticula which play an important part in the diseases of the intestines and with the diagnosis of which we are not sufficiently familiar. In fact, in some of these cases it is impossible to make an exact diagnosis until the abdomen has been opened, so closely do the symptoms of these inflamed diverticula resemble attacks of appendicitis, as I will show by an illustrative case.

There is no doubt in my mind that many of the cases of perityphlitis which were brought forward prominently in the literature some time ago, more especially by British writers, were in reality cases of inflamed or infected diverticula, and it is only recently that surgeons have given this subject the careful consideration it deserves.

Intestinal diverticula consist of larger or smaller hernial protrusions of the bowel wall, usually consisting of all the coats of the intestine, when it is known as a true diverticulum. When some of the coats of the bowel wall, usually the muscular, are absent, it is called a false diverticulum. At first these pouchings of the bowel wall communicate with the lumen of the intestine, but through inflammation the intestinal opening may become closed, and they are converted into cysts, or where they contain bowel contents or retained secretions which have become solidified, they resemble solid tumors. On the other hand, the intestinal opening may remain patulous, the diverticulum being filled with intestinal concretions when, the circulation becoming shut off, gangrene supervenes, and all the symptoms of gangrenous appendicitis present themselves.

According to Hartwell and Cecil,[1] "if no inflammation supervenes the structure remains unchanged, the growth varying in size from a buckshot to a hen's egg, and they do not give rise to any clinical symptoms, thus resembling Meckel's diverticulum and the appendix vermiformis." On

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* Read at a meeting of the Chicago Medical Society, March 8, 1911.

1. Am. Jour. Med. Sc., cxl, No. 2, p. 175.

the other hand, Brewer[2] reports a case in which an acutely inflamed diverticulum of the sigmoid was operated on the same as an acutely inflamed appendix.

In addition to these inflamed diverticula giving rise to symptoms resembling appendicitis they, when involving other portions of the intestine, cause a slowly spreading peritonitis, which it is impossible to differentiate and as Moynihan, Mayo, Griffin and others have shown, become the seat of carcinomata. Conversely, new growths in the large intestine have been diagnosticated as carcinoma when, if a closer examination had been made, they would have been found to be merely inflamed diverticula.

I well remember a case which I operated on a few years ago in which I made a diagnosis of carcinoma of the head of the cecum. It was so large and so adherent that I considered it inoperable, so I contented myself with doing a lateral anastomosis between the ileum and ascending colon, and sent the patient, who was pregnant, home to die. Instead of dying, she was delivered of a healthy child at term, and the growth entirely disappeared. I have come to the conclusion that this was nothing more or less than an inflamed perforated diverticulum, as there were no other pathologic conditions present to account for the mass.

Etiology.—Beer[3] and others have attempted to account for the presence of diverticula of the intestines by a condition of chronic constipation, and they were justified in this assumption by the fact that up to that time diverticula had only been found in patients of 30 years of age and over. Other investigators have since shown the presence of diverticula in the intestines of children. Consequently this hypothesis falls to the ground.

Strain on the mesentery in cases of overloaded bowel or in enteroptosis may explain the presence of diverticula in the small intestine, as they are found usually near the mesenteric attachment on the side where the blood-vessels enter the wall of the bowel.

Chlumsky has proved experimentally that diverticula of the intestines cannot be produced by internal pressure alone, and it would thus seem to be apparent that there must be some defect at present unknown in the structure of the bowel wall which lies at the bottom of this obscure pathologic condition.

Skirving[4] reports a case of inverted diverticula of the intestine where, instead of the hernial protrusion being on the exterior of the bowel, a probe could be passed through several openings in the bowel wall into pouches which were in the intestinal lumen. This would also seem to controvert the theory of internal pressure as a causative factor. We will still have to leave the etiology of this condition as an open subject.

Pathology.—In all the cases reported which have been examined post mortem and in which no symptoms have occurred during life, the diverticula consisted of protrusions of either all the coats of the bowel wall, or the mucous and serous coats, the muscular being absent. In those cases where infection had occurred without perforation, the walls were thickened, and a round-celled infiltration into the connective tissue of the intes-

2. Jour. A. M. A., Aug. 15, 1908.
3. Am. Jour. Med. Sc., 1904.
4. Brit. Med. Jour., 1907, p. 256.

tine had taken place. A greater or lesser degree of peritonitis was found, according to the severity of infection. Some of these inflamed diverticula contained intestinal contents and were in a high state of inflammation, while others had gone on to the suppurating stage. Others, again, which had become closed off from the lumen of the intestine, resembled cysts or solid tumors.

Those cases in which a marked degree of infiltration had occurred involved the wall of the adjacent intestine, encroaching so much on the caliber of the bowel that obstruction had resulted. Finally, long-continued pressure on the walls of the diverticula had resulted in perforation, producing a peridiverticulitis, with abscess formation and peritonitis. Colic diverticula in their inflamed state are prone to form adhesions with the bladder and, perforating that viscus, form vesico-colic fistulæ.

Symptomatology.—A great many of the obscure pains in the region of the large intestine, especially in cases of chronic constipation, are undoubtedly due to diverticula undergoing a moderate degree of inflammation. When this inflammation progresses to a degree sufficient to encroach on the intestinal caliber, all the symptoms of obstruction of the bowel supervene. When there is a high degree of inflammation, with or without abscess formation, we have all the symptoms of an acute appendicitis, with localized pain, rise of pulse and temperature, and an increased leukocyte count. If perforation occurs, a spreading peritonitis makes itself manifest, which is only limited by the protecting adhesions while, if perforation into the bladder occurs, we have gas and feces escaping with the urine.

Finally, perforating diverticulitis simulates in all its symptoms carcinoma of the intestine, such as loss of weight, blood in the stools, the presence of a palpably localized mass, pain, and bowel obstruction.

Treatment.—In all cases of obscure pain in the abdomen, when any or all of the foregoing symptoms are present, the abdomen should be opened and the probability of an acute diverticulitis existing should be borne prominently in mind. If one or more diverticula should be found in an inflamed state, they should be removed and the opening in the bowel closed with a double row of sutures. Where an abscess has formed, it should be dealt with in precisely the same way as an appendiceal abscess. Finally, where there is an obstruction of the bowel or a perforated diverticulum, the exigencies of the case alone will determine whether an intestinal resection should be performed, or the adhesions broken up, with subsequent amputation of the diverticulum.

The after-treatment of these cases is the same as that of appendicitis or resection of the bowel, with which all are so familiar.

In this connection I wish to report the following case:

Case 1. Mr. L. B., a strong, healthy, robust man. Married and of the best personal habits. Was referred to me at St. Luke's Hospital with a history as follows: He had always been in the best of health until twenty-four hours previously, when, en route to Chicago on a train, he was suddenly seized with severe abdominal pain. He immediately went home, to bed, and sent for his physician, who made a diagnosis of appendicitis, but decided to wait. As the pain continued and vomiting set in, he was removed to St. Luke's Hospital.

Examination revealed a very tender area over the appendix. Temperature, 99.8°, and pulse 72. Leukocyte count, 13,900. As the pain was so pronounced, I opened the abdomen that afternoon, and immediately found what appeared to be a gangrenous appendix, which was removed, and a small drain inserted. For the next two weeks the patient did well, with the exception of some degree of tympany and a prodigious thirst. The urine contained neither sugar nor albumin. We had difficulty in moving his bowels, so much so that an enema had to be administered daily. A peculiar feature of the enema was that the orderly, who has been employed at the hospital for years, told me he had never seen such large, copious bowel movements follow enemas for so long a time after operation when the patient was on a liquid diet. He progressed favorably, having free bowel movements and passing large quantities of flatus until the fifteenth day, at 4 p. m., when he began having copious emesis of a brown watery character, which kept up constantly, and soon became fecal in character. Singultus also developed. His pulse rate suddenly jumped to 132. I reopened the wound at 11:30 p. m., and found the ileum enormously distended. I made an enterotomy, releasing three or four quarts of liquid feces, and much gas. I injected into the bowel ℥i of saturated solution of magnesium sulphate, and closed the opening by Czerny-Lembert sutures. I then explored the bowel and found that what I supposed was the appendix had been removed from the small intestine. Just below the stump was a narrowing and thickening of the bowel wall, but as I could milk intestinal contents through it, I paid more attention to two fibrous bands which were binding two loops of the ileum together in a kinked position. I left in a drain and put the patient to bed.

The following morning he had a slight bowel movement of the same character as the fluid which I found in the small intestine the night before, showing I had milked some of it past the obstruction. He passed a good deal of flatus and was very comfortable all day. He slept at intervals during the night, but next morning, the seventeenth day, the singultus and vomiting recurred, and he had all the appearances of bowel obstruction, and was desperately ill.

As a last resort, I made an enterostomy and in doing so found this same induration and narrowing of the ileum. I also discovered the cecum lying away up behind and above the stump which was left on the small bowel. There were no more adhesions present, and the bowel drained freely, but, unfortunately, the patient succumbed to exhaustion thirty-six hours subsequently.

The specimen which I removed at the first operation resembled exactly a moderate-sized appendix with a very small short mesentery. It was filled with fecal concretions and absolutely gangrenous. I am now convinced it was a diverticulum of the ileum simulating appendicitis. A bowel resection, had it been made at the time of the first operation, would undoubtedly have saved the patient's life.

Unfortunately, no post mortem was secured.

DISCUSSION

Carl Wagner: I do not know whether I can add anything new or not to the subject so well treated in this paper, but I am very glad Dr. Cuthbertson brought it before the society because so very little is known of this very important subject—important to every one, not only the abdominal surgeon. I am sure all who have operated on the intestines often have had a number of unexplained bad results, some of them no doubt due to overlooking diverticula or not bearing such occurrences in mind. I have had two cases of this kind in my early practice which called my attention to this question; however, I shall not go into them at this time, but will perhaps make them the subject of a paper at some future time. I would like to confine my remarks to a few points of the anatomy and pathology of diverticula and diverticulitis.

The conception of the term "diverticula" seems to begin and end, in the minds of many, with Meckel's diverticulum, as far as the abdomen is concerned; but we have in the abdomen just as in the esophagus pulsion pressure and traction diverticula and I know of one case, "Hochenegg," in which a Meckel diverticulum caused a traction diverticulum as you may see from the illustration which I give you here. (Illustrated the point at the board by diagram.) Fig. 1.

Another possibility in development of diverticula which should not be overlooked may occur near the stomach at the entrance of the bile-pancreatic duct into the duodenum. (Diagrammatical illustration.) Figs. 2 and 3.

Furthermore, diverticula may develop at any point on which an opening from the bowel into the peritoneum exists, as for instance along the blood-vessels of the epiploic appendices, or upon the basis of some previous pathologic condition of the bowels. False diverticula may develop from old ulcers of the bowels. Hundreds of diverticula have been observed in the same person, especially located on the sigmoid.

Fig. 1.—Meckel's diverticulum causing a traction diverticulum on the same part of bowel.

This leads me to the subject of mesosigmoiditis. I believe many so-diagnosed cases were originally diverticulitis which finally invaded the mesentery of the sigmoid. They have a tendency, if they do not degenerate into abscesses, to form strong and dangerous stenosis. Those which develop into abscesses break through into the bladder to the extent of 20 per cent. and thus establish intestino-vesical fistula.

I feel quite positive that many cases in which colostomy had been performed on account of a supposed diagnosis of carcinoma of the lower colon or sigmoid and had continued to live for a long time after the operation or had improved in general health very much, must enjoy the benefit of the doubt that they probably represented diverticula and diverticulitis complicated with large infiltration of the bowel and surrounding tissues producing a state of stenosis of the bowels, resembling very much a tumor like carcinoma, but were entirely void of any malignant character.

In this connection, I recall one case in particular which I observed in the University clinic at Halle during the time of Volkmann. A patient was brought in for operation and well looked over once more by the internist (the operation

was to have been for extirpation of carcinoma of the sigmoid) when the professor of internal medicine, Weber, put the question whether or not the bowel had been thoroughly and frequently emptied. He was assured that it had but in spite of this he requested more high rectal enemas as he contended that if the large mass represented a carcinomatous growth, a radical operation would be out of question at this stage of the disease and a few more days of waiting would certainly not aggravate the condition very much. In the course of two days a whole bucket-full of hard scybala was washed and massaged out of this man's intestines and a wonderful cure of this large cancer effected in this simple way.

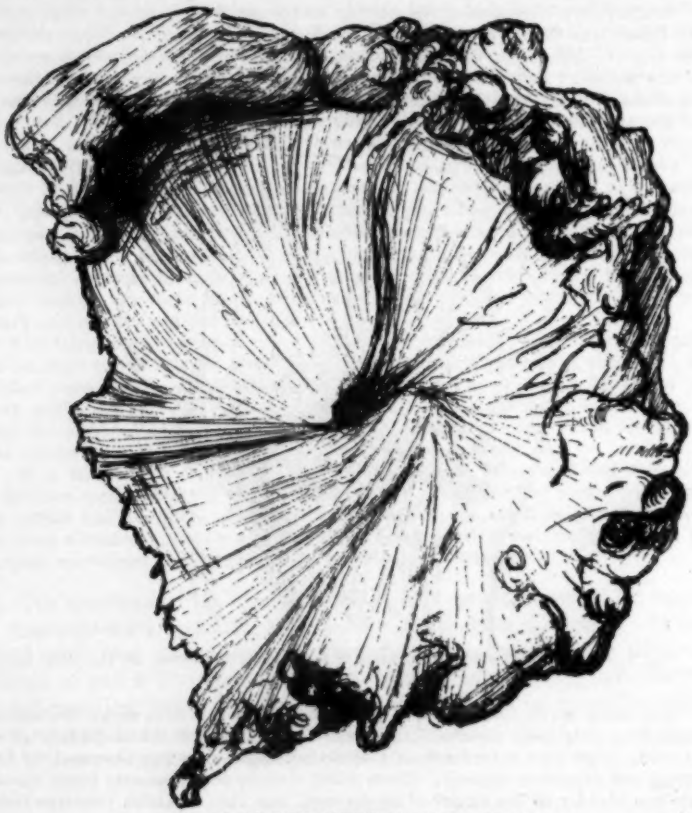

Fig. 2.—Multiple diverticuli of the sigmoid

Wm. Cuthbertson (closing the discussion): I am much obliged to these gentlemen who bear me out in the important place which this condition assumes in relation to abdominal obstruction. Dr. Wagner has illustrated conditions which may occur as it affects the sigmoid. Beer has drawn particular attention to the fact that they infect not only the sigmoid, but ascending and transverse colon.

Dr. Wagner has called attention to the relation of these conditions and sigmoiditis. That is true, because these multiple pouches become filled and cause sigmoiditis. Cecil and Hartwell call attention to the fact that these being filled, produce this condition, and go on to the suppurative stage producing conditions which simulate appendicitis on the left side.

In regard to these pouches being high up, near the pylorus, it would seem to me that the pouches have been produced there not by intraintestinal pressure, as that is the region where we have so many lesions that traction could be produced on that portion of the bowel and in that way produce these pouches which form the diverticula.

In regard to the strangulated diverticula and referring again to the case I reported to-night: if a diverticulum has perforated and is discharging into some other viscera it is simply a matter of opening the abdomen and reversing the stump.

You may wonder why I did not locate the position of this diverticulitis which I have mentioned. When one opens an abdomen and finds a gangrenous appendix he should not dig around for other conditions. I took it for granted

Fig. 3.—The interior aspect of a piece of bowel studded with multiple diverticuli.

that the diverticulum simulated the appendix. I simply lifted up the bowel, exposed as little of it as possible and inverted the stump.

When I open the abdomen in the future if I am not absolutely sure what the condition is I shall pay much more attention to the condition of the bowel surrounding it and if I have the slightest suspicion shall do a bowel resection.

"606" *

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CHICAGO

When your presiding officer called on me with a request to speak on the question of Ehrlich's "606" at this important meeting, I was fully

* Read before the meeting of the North Central Branch of the American Urological Association, at Chicago, Jan. 5, 1911, and at the meeting of the Chicago Medical Society, Feb. 1, 1911.

aware that I would appear before a body of men who were well acquainted with the facts of this question as contained in the current literature, and therefore will not dwell on citing many miraculous cures from it nor take your precious time otherwise than for the purpose of briefly stating to what conclusions my study and observations at the different clinics in Frankfort, Heidelberg, Magdeburg, Kiel, Berlin, and the Rockefeller Institute have led me.

My first visits to Frankfort at the end of August and during September reminded me very much of the exciting days of 1890, when Koch's tuberculin set the whole medical profession frantic and filled the hearts of so many millions of suffering phthisics and their friends with bright hopes, which only faded so quickly, and often so sadly. It so happened that from our own clinic in Halle the very first tubercular patients were sent to Berlin to receive the great blessing of the new medical era. Many of them came home silent forever. The wave of excitement in the medical profession ran just as high then as in September, 1910, at Frankfort.

Naturally, with this recollection in mind, I went to Frankfort very skeptical. I visited Herxheimer's clinic; I was present at the demonstrations at the gynecological clinic; had interviews with neurologists at the Speyerhaus, etc.. What I had read on the subject in medical journals looked very big to me, but what I saw in reality in Frankfort and had a chance to see again and keep on watching impressed themselves as wonders and miracles on my mind. One of the greatest treats which we enjoyed was afforded to us in the 6th of September meeting in which reports of 5,750 cases were on hand, with 300 cases from the skin clinic at Frankfort alone. Ehrlich appeared personally that night and read the reports of the most interesting cases and commented on them. The crowds of visiting medical men which in those times poured into the laboratory office of Ehrlich, speaking all varieties of languages, armed with all kinds of letters of introduction from various offices, schools and hospitals, and further personal calls from high dignitaries, and so on, wore terribly on the professor. The thousands of dispatches and money orders which were returned unopened, letters of the most various kinds demanding information, turned the whole Therapeutic Institute into a veritable storeroom. Ehrlich finally took refuge in Baden Baden for a rest. In the meanwhile the high wave of excitement calmed down some, so that my last few visits found him more rested and more approachable.

He spoke then at length and very emphatically of the great advantages and the good results of the Schreiber method and recommended in particular the careful study of the publications of Gennerich, as well as a visit to the Marine Hospital at Kiel, which I promptly made, to my greatest satisfaction.

I must confess the simplicity of the preparation of the intravenous injection fluid, as witnessed at the City Hospital at Wiesbaden, with Weintraub, and Schreiber at Magdeburg, as well as the tolerance of the patients to the intravenous introduction of "606," especially the method

of Schreiber, impressed me so favorably that it seems to me to deserve the preference over the intramuscular or subcutaneous one, as far as the technical points are concerned. There was never a hitch in any case, either in preparation or in application of the chemical, and the expressions of the patients regarding pain were very much more satisfactory and encouraging than those which we received from those treated by the intramuscular or the subcutaneous method, which latter were often very pitiful.

The method which I prefer and practice is the one brought out by Schreiber, and is as follows: the substance is put in a glass receptacle and dissolved with warm distilled water, in the proportion of 10 c.c. to 0.1 of "606." Often there will be segregation of a few particles, which

look exactly like gum arabic. This is dissolved very readily by adding more water. Then we add 0.7 of normal soda solution to 0.1 of the substance, which renders the solution turbid. This turbidity disappears very readily on shaking. We then bring the quantity of the solution up to 250 with sterilized physiologic salt solution.

Syringe.—For the injection of the solution we use a syringe as devised by Cassel, in Frankfort. This we fill with half an ounce of physiologic salt solution and then enter with the needle into one of the cubital veins, which is made more visible and tangible by a slight constriction of the arm above with a rubber tube. We then aspirate a small amount of blood into the syringe containing the solution, in order to convince ourselves that we have entered into the lumen of the vein. Then we turn

the stopcock of the needle, fill the syringe again, this time with the "606" solution, and advance this amount with slow pressure into the vein. We repeat this until the 250 c.c. are injected, then pour another half ounce of physiologic salt solution in the glass receptacle and inject this also in the same way into the vein. This latter is practiced in order to avoid any of the medicated injected fluid diffusing into the tissue near the puncture of the needle, while extracting the same, which would mean irritation and pain and possibly infiltration; or, in other words, the column of fluid in the lower part of the vein down to the opening, which is made by the needle puncture, is salt solution and not "606."

The whole procedure should consume not less than six minutes. The patient is best placed on a couch or bed, the operator sitting at the right side of the patient, who is in a reclining position. The glass receptacle is placed between the patient's arm and body on the right side. A nurse attends to the filling of the receptacle and also the turning of the stopcock of the syringe, while the doctor's hands rest perfectly quiet on the patient's arm, which must be absolutely quiet and steady. After withdrawing the needle from the vein, a small pad of sterile gauze is placed over the opening made by the needle in the skin, and fastened with some adhesive plaster.

Everything pertaining to this operation must be done with absolutely the same careful observance of asepsis as in any other surgical operation. During the whole procedure there is hardly any complaint on the part of the patient. In older people who have arteriosclerosis or plethora, congestion of the head may be slightly complained of. The patient is then put to bed and, in my opinion, is best kept there for a day. There will be a rise of temperature in the first twelve hours to as high as 101 F., gradually ascending, and also gradually descending in the next twelve hours.

In regard to temperature, I would like to say that with a second injection, six or eight weeks afterward, there is almost no rise of temperature. After from one to four hours there may be a feeling of cold through the body, but not a real chill. Sometimes patients complain of nausea and some headache. Very seldom does it come to a complication like vomiting or diarrhea. At the end of the second day most of the patients feel absolutely well. The vomiting and diarrhea have been proved to be the result of an irritation of the stomach and intestines by arsenic and not by the soda solution. If by chance a lesion of the vein should occur and some fluid enter into the adjacent tissues, there would be no great danger to the tissues, as in a very short time afterward it would be absorbed and disappear, but no necrosis follows.

Complications.—There has never been one case of death from intravenous injection, properly used; nor were any untoward complications observed, except a very few slight thromboses of the veins, which resulted in recovery in eight or ten days. The experiences with the intramuscular and subcutaneous methods differ from these enormously. There are about 8,000 out of 10,000 cases injected after the Wechselmann method which have large and sometimes very bulky infiltrations, causing a great

deal of pain and inconvenience, beside mental anxiety. Some of them dragged on for weeks and even months, and some of them had to be operated on. I remember one case in particular, which concerned a medical student who had been injected after the Wechselmann method in Königsberg. He came to Magdeburg in a most deplorable condition, suffering intense pains, a month and a half after injection, and exhibited a very large mass in the scapular region, which had to be opened and drained.

A widespread idea exists that these large tumefactions contain only sterile fluid; in reality quite a large number of them have proved to be real abscesses. Necrosis of the most disastrous dimensions are on record, of which the one of Buschke is certainly worthy of mention. An injection, which had been applied by him under the mamma, had caused such enormous destruction that even the bone was eroded and a perforation into the pleura was feared.

Experiences of this and other kinds with "606" had made Buschke so timid in the use of the new remedy that he went to the other extreme, giving out a statement that "606" would not be used in his clinic except in cases in which everything else had failed.

But there are other points of importance to consider with regard to the intramuscular and subcutaneous methods. The so-called "depot": what will, for instance, happen if one of those depots should break through into a vein? This possibility is not so far-fetched. The sudden entrance of "606" solutions of such high concentration into the blood circulation would most certainly have the same disastrous effect as the case of Frankle, who injected "606" in 20 c.c. intravenously, which resulted promptly in death. He then advised against all intravenous injections. His procedure as well as his deductions are, of course, most absurd, and especially so when we have now 1,200 cases of proper intravenous injections authentically reported on hand, in which not the slightest mishap is to be deplored.

Depot.—One other point deserves our special inquiry. How much of the depot is absorbed and how fast? What will you do in case recidives occur in the presence of such a large depot? Is it not a very uncertain matter, and would it not be possible that through some active changes in the tissues a large amount of the depot might be thrown suddenly into the blood circulation and cause unlooked-for complications, in the form of arsenic intoxication? Furthermore, chemical changes of as yet unknown qualities may take place through oxidation and reduction of the chemical which may prove to be very poisonous. The depot region is objectionable as a *locus minoris resistentiæ* which may react very unfavorably to trauma at any time.

Another rather disagreeable character of intramuscular or subcutaneous injections constitutes the probability, according to observation in some cases, that after an interval of eight or ten days (and I remember one of fourteen days, in which the man was free from pain) the patients are suddenly surprised by a new and intensely violent attack of pain, which may last even days, requiring application of ice-bags and morphin.

Solubility.—In this connection it may be well to inquire into the degree of the solubility and length of time during which the chemical circulates in the body. Recent experiments by Loeb show that even as late as three months after the injection some arsenic may be found in the circulation. The subject of solubility of the drug must be naturally of the highest importance, because it decides in what condition the preparation should be introduced into the system. Very little is heard in general discussions on this point; in fact, some men who used this remedy have never even taken the trouble to enlighten themselves on this question. They have only the vaguest conception of this most fundamental factor concerning this new remedy.

Arsenic is very little soluble in the free state and very freely soluble in alkaline and acid solutions. The lowest degree of solubility is present in slight acid or alkaline reaction, but it is just the blood which represents this slight alkaline reaction. This condition of the blood robs the arsenic of its poisonous character, because it is therefore very little soluble in the blood. The solubility is estimated to be about 0.001 per cent.

The effect of "606" is about as follows:

1. Mucous patches, larynxedema, macular syphilis, intolerable syphilitic pains in bone disappear within twenty-four hours.

2. Erosive chancres, pustular syphilids, facial paresis, abducens paresis and early icterus yield in forty-eight to seventy-two hours. Most surprising is the perfect process of epidermization.

3. Condylomata disappear in eight days, with full restoration of the skin. Papular syphilis terminates within two or three weeks. Wassermann has been observed to turn negative as early as forty hours, and on the average of about three to four weeks. Patients invariably increase in weight and brighten in humor. It may be well to state here that in some obstinate local affections the application of the dry powder of "606" has proved very efficient in some cases.

Tabes, especially pseudo-tabes and pseudo-paralysis, seem to come in of late for a better share of treatment with "606," as at first anticipated, on account of the former fear that atrophy of the optic nerve might be aggravated. It has been demonstrated that the thirty-seven notorious scare-crows of amaurosis in the literature were due to atoxyl, which is

entirely different in its relation to the nervous system in general, and in particular to the optic nerve. Atoxyl is neurotropic, circulates in the blood and possesses strong affinity for the nerve substance in the body, producing in some cases progressive atrophy of the optic nerve with fading of the papilla. Ehrlich has maintained that arseno-benzol, on the contrary, is very little, probably not at all, neurotropic, and is borne out in his assertion in over 20,000 cases so far injected, which have shown no ill-effects on the optic nerve. We have the report of a number of cases on hand in which patients not only with beginning atrophy of the optic nerve but almost blind ones have been subjected to "606" without any untoward results. This has widened the field for the use of "606," not only in regard to ophthalmology, but also as to cases of paralysis, tabes and pseudotabes, and in regard to the latter, more justifiably so, when we remember that, according to Erb, many of these cases are still victims of active syphilis, such as blood-vessel changes, gummata, skin affections, which positive Wassermann proves to coexist with their well-established sclerotic processes. Even trophic ulcers of the soles of the feet disappeared readily through "606" in similar cases.

Of course, arseno-benzol does not claim to change any of the sclerotic degenerative processes, but is only injected with the idea of controlling the still existing active syphilitic conditions. Cases of tabes with heart muscle degeneration or stenosis must positively be excluded from this treatment, as the lowering of the arterial blood-pressure, one of the well-known effects of "606," might prove dangerous and even fatal.

Exanthemata.—In hyperesthetic patients exanthemata occur to the extent of 1 per cent., which develop about the seventh to the twelfth day, with a rise of temperature to 104 F. Large areas of inflammation develop around the point of injection. Eruptions, like scarlatina, appear on the trunk and extremities very symmetrically, accompanied with conjunctivitis, vomiting, diarrhea, coated tongue, thirst, general malaise, but no involvement of the kidneys. These exanthematous conditions and the fever are only of a few days' duration, during which the pulse always remains good. An analogy is offered by Schlick in the serum treatment, according to whom not the serum produces the toxemia, but the effect of the antigen on the organism creates the toxins.

Acousticus.—With reference to the selective toxic effect of "606" on the cranial nerves, especially the auditory as pointed out by Fingar and Rille, the following may be said:

The analysis of the reported cases of auditory disturbances and the comparison with cases treated by other remedies than "606," lent an entirely different aspect to this question because:

1. Never before had so much attention been paid, careful observation applied and detailed reports brought in as since the existence of "606"; consequently more of such cases have now appeared in the literature.

2. Absolutely the same auditory affections occur in the same period in the course of syphilis, whether treated with "606," mercury or iodids.

3. These auditory manifestations, without exceptions, all take place during the secondary stage of the disease.

4. Most of the syphilitic changes in the nervous system appear in the first year after the infection and decrease from year to year; 48 per cent. take place in the first three years, 4 per cent. iritis and iridocyclitis, 6 per cent. neuritis optica develop in the first year after infection.

5. These complications must be considered to be neurorecidives and we must accept that the syphilitic deposits in these nerves escaped the effect of the first treatment; (1) on account of their unfavorable anatomic disposition, and (2) because the blood circulation was so overfilled with spirochetes that the drug could not cope with all of them at first. By unfavorable anatomic disposition is to be understood: the nerves possess only a very poor vascularization, which may easily be disturbed through as powerful an irritation as syphilis. This holds particularly true in regard to such nerves which are tightly encased in dura envelopes and pass through narrow bony canals as in the case of the auditory and facialis on entering the meatus auditorius internus. Furthermore, the ear represents a *locus minoris resistentiæ* on account of the frequent syphilitic affections of the throat, which very readily produce occlusion of the Eustachian tube and constitutional hyperemia of the ear.

6. The dissemination of the spirochetes seems to be unproportionately numerous from initial lesions of the head, especially from chancres of the lip and tongue. In reality five out of ten of the cases in question had as initial lesions chancres of the head and three others were extragenital, one on the hand.

7. But the last and strongest argument consists in the fact that auditory lesions in cases treated with mercury or potassium iodid were cleared up with "606" itself.

The Blood.—The effect on the blood consists in quite an increase of leukocytes, which rise sometimes up to 38,000. It acts very favorably on the lecithin metabolism. According to Heubner, no met-hemoglobin is formed.

Eyes.—Michaelis injected four cases of choked disc, of which three yielded perfectly. Gummatous iritis, keratitis parenchymatosa and even some affections of the corpus vitreum have been beneficially influenced.

Spirochetes.—What becomes of the spirochetes under the influence of "606"? In six patients, infants, who died a few days later of other intercurrent diseases, the post mortem showed no spirochetes in any of the organs or the blood, with the exception of the lung of one case, in which a few degenerate, agglutinated specimens were detected, which were in the last stages of dissolution.

If we scrape from papules of the vulva, which is rich in spirochetes, soon after the injection, some secretion, and subject this to examination,

we find that the motility of the spirochetes has almost entirely disappeared; they lose their finer outlines, and swell up.

Contra-indications to the Injections.—These are all cases which have weak heart-muscles, especially in tabes, stenoses, cases of hemophilia; the latter on account of the tendency to hemorrhage through the toxic effect of arsenic on the small arteries and capillaries. For the same reason cases recently operated on should be excluded. Profuse hemorrhages have been noticed in these. Further must be excluded putrid bronchial catarrh, large aneurysm and far-advanced cases of degeneration of the general nervous system.

Advantages over Mercury.—The advantages over mercury are as follows:

1. People who would for some reason or other not submit otherwise to inunction or any protracted treatment with mercury are more apt to try a single injection of "606," and may in primary affections be cured permanently, and sooner be safe for their environment.

2. In doubtful cases, when a primary lesion has not yet developed, but reason exists that the patient has been exposed to syphilitic infection, "606" may be considered. Especially does this pertain to cases of the so-called *syphilis d'emblé*, which so often occurs among physicians and surgeons, through a prick with a needle or a cut with a scalpel during operations. One single dose may act as a preventive.

3. In primary cases, especially if excision of the initial sclerosis could be combined with a full dose of "606," it might be of abortive effect if done early, because the spirochetes are not blood parasites, but pass only once through the blood current, and quickly nestle in the tissues. It is for this reason that we so seldom are able to find the spirochetes in the blood circulation. When I say excision of the primary lesion, I am well aware of the fact that when the lesion is developed dissemination of the spirochetes through the whole system has taken place, but perhaps not heavily nestled and settled or encapsulated in the tissues. It is probable, then, that the number of spirochetes which enter into the blood circulation will be less if the main focus is wiped out, and that the constitutional treatment with "606" will be more effective. Of course, the excision must be carried far through the healthy tissue and the wound well cauterized, with the application of "606" powder, because we know that spirochetes may exist, even in tissues which show neither macroscopically nor microscopically any changes, as has been demonstrated on the infected cornea. We know, further, that the seat of the primary lesion as well as any focus of spirochetes are the places of predilection for the development of tertiary syphilis.

4. Most cases which do not respond to mercury any more and real malignant syphilis have certainly found in "606" their true friend, because "606" *fast spirochetes* really do not exist, according to the more careful observers, especially such as Gennerich, of Kiel. He has shown in a number of malignant cases that, in spite of the great obstinacy of the disease, the repetition of the use of "606," supported by the mercury treatment, if intelligently followed up, will finally lead to successful

results. I remember one case in particular in which the destruction of the soft tissues as well as the bones in a young soldier was most terrific and rapid. The first few injections were very discouraging in regard to their lasting effects. He kept on introducing arseno-benzol in short intervals, and arrived at the seventh injection. This cleared up the condition very satisfactorily and the process was put under full control.

5. With "606" we cure without any risk the fetus *in utero* and the new-born through the lactation of the injected mother, which must be considered as one of the most wonderful properties of "606." It is to be noted that neither the milk secretion of the mother diminishes during the fever period, nor does the child show any discomforting effects.

6. On diseased tissue "606" has a special elective effect, as we see from the good results in psoriasis, lichen simplex, verrucæ, and so on.

7. We must mention in particular the strong tendency to epidermization even in the most obstinate and inveterate cases.

The effect on toxic cachexia from syphilis is very rapid and favorable, inasmuch as in a comparatively short time a great increase in weight and better general well feeling can be demonstrated. Even if these cases of cachexia do not give a Wassermann-negative, which proves that there are still some syphilitic active foci, they do not fall back into the same old state of cachexia again, as before.

In cases where an idiosyncrasy for mercury exists or which are mercury-fast, it is the one resource, and in cases in which life is directly in danger, as in gummata of the larynx, syphilitic angina, and so forth, it may act as a life-saver.

Does it deserve the high title *therapia sterilisans magna*, and what position does mercury hold now in the treatment of syphilis? So far the cases fully cured with one injection cover only a period of one year and five months. Many primary cases had to be reinjected, on account of recidives. Every experienced specialist on the question has cases on hand which, while not with one dose, but with one inunction treatment of mercury covering a month or two, remain free from all syphilitic demonstrations. Heubner quotes two cases which after the inunction treatment with mercury twenty-four years and eighteen years ago, respectively, enjoyed perfect health, never showed any syphilitic demonstrations; their wives and children are well and sound to-day, and are Wassermann-negative.

Gennerich at Kiel has come to the conclusion from his most careful study of the question that every initial sclerosis of long duration, or secondary and tertiary condition, is more amenable to the good effects of "606" if it is treated beforehand for a short period with mercury. Schreiber, who has perhaps 1,000 cases of intravenous injections on hand, has established as a routine treatment the rule that all cases undergoing his intravenous injection of "606" are subjected to the injection of mercury, beginning eight days after the introduction of the "606" into the system, to be continued for eight weeks after. If at this time the patients are still Wassermann-positive, another intravenous injection is resorted to,

followed up again with mercury treatment in the same way as before stated. He makes the point that the mercury used must be arsenic-free.

If we further consider the disposition of the spirochetes to settle in the lymphatic spaces and tissues, where they surround themselves with a wall of connective tissue, then any means which can cause the spirochetes to break through this wall and effect a flow of lymph through this depot again must be considered a great aid in wiping out such syphilitic deposits, as then the "606" can reach them. Such exists in fibrolysin, which therefore might be combined with the general treatment.

The results of Schreiber and Gennerich are so satisfactory that I believe the combination of the old standby, mercury, with the new remedy "606," in the hands of the specialist or those who have made careful study of the question, will be the treatment of the future, until further observations teach us differently.

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THE MIXED PHASE OF MANIC DEPRESSIVE INSANITY, WITH STUDIES IN FOUR CASES *

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The presentation of this paper is not to place forth an original idea, but rather a revival of a certain group of symptoms which, when occurring together, form a certain class or type of mental disorder.

Kraepelin and Weygandt describe a certain interesting group as the mixed type of manic depressive insanity. It is of this type that I wish to speak.

Kraepelin and Dreyfus have, I think, concluded that the involutional depression might and is classed as a mixed form of manic depressive insanity.

Kraepelin has lent a great service to psychiatry in demonstrating the necessity of grouping certain symptoms and a closer study so as to be able to describe certain disease entities. By some this has reached an extraordinary position, by showing certain minor features of the symptom-complex of involutional melancholia and finding that certain depressed cases recovered, while still others were progressive, ultimately arriving at a very large grouping, namely: non-deteriorating, or functional psychosis, and deteriorating. This, on the face, shows a loss in the research of mental diseases rather than progression.

During my work among the insane, I have been struck by the dissimilar picture of manic states and still greater by the dissimilarity of the depressed phases along with a variability of individual symptoms throughout the attack, which as a whole do not harmonize with the manic states or depressed phases. It is not uncommon in circular insanity to see a transition from one phase to the other and that the change of the

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symptoms are not always accomplished in the same length of time. A lessened motor activity may be the first symptom to abate in transition from the manic states. Later the patient may be content to lie in bed but still retain the pleasant and exalted mood with a flighty talk which gradually subsides as the symptoms of depression intervene. In the transition from depressed states to manic, we may have increased motor activity with later the other symptoms gradually appearing. The occurrence of the symptoms as referred to above are not always the same but by a purely schematic view-point a great many varieties of changes are possible. The mixed condition shows that the components of manic and depressed states show a very close association and possibly led Kraepelin to class the depressed and manic states into one group, namely, manic depressive insanity, subdivided into three phases, the manic, depressed and mixed.

The study of manic depressive insanity is purely a disarrangement of the associative sphere of consciousness. The stuly of association will necessarily embrace the neuron theory and is based on Lugaro's observation, namely, that a nervous impulse passing from one neuron through another to a third, causes certain gemmules or branches of the second to protrude and assures contact between one and two. In turn gemmules or branches of the third protrude and hence the second and third are in contact. In this way reaction passes from first to third.

The sites of contact between neurons are called synapses and McDougall has claimed that they play an important part in the rôle of psychical processes. It is probable that the contact is incomplete, the intraneural tissue offering a certain amount of resistance. This resistance is shown in the short delay of time found in eliciting a reflex.

The physiology of reflex action does not concern us so much here; suffice to say that the rate of transmission along a nerve fiber is constant regardless of the intensity of stimulation. But in reflex activity an intensity of stimulation shows an increased reflex action. This shows that there is some resistance to stimulation and it is to be inferred that it occurs at the synapses. To explain how this bears a relation to mental process we will consider, for example, a sudden sound or flash of light will produce a sudden closure of the eyelids reflexly; but if this sound or light is insufficient in stimulation independently to provoke a reflex, it will, if occurring at the same time, or with short intervals of time, provoke this reflex. This action is due to a stimulation of two or more receptive centers (if the stimuli are too weak to provoke an action independently they are called subliminal stimuli or facilitation). The facilitation is shown by centering our attention on a movement, the greater will be the reaction to certain stimuli.

Now, to discuss further: the neuron is charged with a substance called neurin, which is similar to a Leyden jar charged with electricity. Each stimulus received by a neuron increases the amount of neurin which, when charged to a certain degree, overflows at the synapses and so on through certain other neurons and according to the law of conservation of energy, is converted into work. This neurin which we have spoken of

usually passes by means of the law of least resistance and the point of overflow is usually at the place where it previously occurred. This gives us a peep at the physical basis of habit.

By sensory stimuli we are enabled to retain consciousness. This may be criticized by some, claiming that certain inorganic substances are subject to external stimuli, but this subject embraces a discussion of metaphysics and, possibly, will never be settled. By retaining consciousness we must again call on the neuron theory for support. By an intricate connection of neurons we receive on our cerebral cortex certain percepts, reflexly.

For example: by the end organ, rods and cones, to the internal granular layer of the retina, next to the gangliar layer, in turn to the external geniculate body to the occipital lobe and from this to the frontal, parietal, occipital, temporal and island of Reil, our cortex receives the percept yellow and round. Through the tactile corpuscles we feel roundness and roughness. Through the muscles' spindle we perceive weight. Through the hair cells we hear a certain sound or thud on dropping an object. By means of the Schneiderian membrane, through its pathways of neurons, our cortex is conscious of a certain aroma. Through the bipolar cells we are enabled to perceive resilience. The above percepts, yellow, round, rough, weight and resilience, sound on falling and the aroma, are collected through the physical presence of neurin overflowing at the synapses the same place as before, each sensation received at the cortex at the proper time, to collect the percepts to form the idea of an orange.

As a summary of association we divide it into projection areas, namely, the Rolandic area, anterior part of parietal lobe, occipital lobe in part, first temporo-sphenoidal convolution and limbic lobe. These contain motor neurons but greater and overlapping sensory neurons, each variety of which is termed psychomotor sphere and psychosensory sphere of consciousness, respectively. The true associative areas are supposedly located in the frontal lobe. The posterior part of the parietal, the occipital and temporal and island of Reil. These areas are termed the intra-psychic sphere of consciousness.

By this our consciousness embraces the associative areas and projection areas or is divided into psychosensory, psychomotor and intra-psychic spheres of consciousness, or to make it more plain, one is conscious of stimuli, these stimuli are weighed and a decision is reached by the function of the associative areas, resulting in muscular action. This condition is purely reflex and occurs at the synapses due to overflow of neurin.

Manic depressive insanity is a disordered function of the intra-psychic and psychomotor sphere of consciousness. In manic states one receives all sensory stimuli, and by a hyperactivity of the associative areas and an attempt to obtain a resultant, shows itself in an increased motor activity or psychomotor activity. By a hyperactivity of these associative centers one stimulates old percepts or association and by touching or tapping a certain idea with a percept one gets an increased activity of association and the result is flight of ideas or flighty talk. By tapping percept I mean that when one sees the color red, immediately the idea of

red house or idea of certain uniforms, etc., presents itself in speech through tapping an old percept in the associative areas. These tapping percepts are not brought into association with the immediate surroundings but previous percepts prevail in the intra-psychic sphere and consequently we get a clouding of consciousness with some loss of orientation either as to place, person or time, depending on the degree of functional disorder.

In depressed phases one shows a paralysis of the associative sphere or a lack of decision, spoken of as difficulty in thinking out. This is termed a retardation of thought, which means difficulty of association. Retardation of thought is not found alone in depressed phases but may be due to destruction of neurons in organic states. The sensory percept is also at fault or the threshold value lost.

In the mixed state of manic depressive insanity we may find a number of conditions which is a disarrangement of the intra-psychic and psychomotor sphere of consciousness with some hyperactivity of certain neurons and an abeyance of function in others.

The following cases will illustrate:

Case 1.—Miss C. W., admitted March 23, 1910.

Mother died at the age of 36, while confined in a hospital for the insane. The father is a farmer, has considerable means, is quiet and retiring. Was born in Germany and uses beer moderately.

The patient is 20 years of age; single; has always been in good health. The present illness came on gradually; worrying and accuses herself of wrong doing. This gradually increased until she came to the hospital.

She was under weight but complexion was florid. At the time of her admission she was very resistive, every movement was resisted. After being placed in bed she became very restless, moved her arms about in an irregular manner, ran about the ward purposelessly, falling about. Restraint was necessary to prevent injury. All the time she refused to talk. Her facial expression was of depression with anxiety, with a depressed mood. Later, she gave as a reason for not wanting to remain in bed, that she had no money to pay for it. Her restlessness subsided to some degree, but resistiveness became more marked. Her appetite became poor and it was necessary to feed her by force; in consequence her emaciation became extreme. She would stand in one position for hours with eyes open, resisting every movement. Later she would resist going for a walk. It was necessary to use force to get her in the dining room and again resistance was encountered when an attempt was made to take her from the room. Six months later she became so emaciated that it was necessary that she be placed in bed to reserve her strength. A month later the resistiveness was not so marked. She then spoke of hallucinations of hearing, saying that her step-mother was dead. She talked some. There was no flight in her stream but a marked retardation of movements. She continued to improve until in November she began to take more interest in her surroundings, talked freely with some hypo-manic symptoms. A marked clouding of consciousness was elicited, gave as a reason for being resistive that she was unable to pay for bed and food.

November 18, nine months after her admission she was parolled to her father. At present she has, from all outward appearances, recovered.

At first glance this case suggested the dementia præcox group, possibly due to the mutism and resistiveness. This group, however, is only superficial and upon closer study we are compelled to classify her as belonging to the manic depressive group of the mixed type. Her depressed mood, her anxiety, her motor restlessness and clouding of consciousness confirm the diagnosis. We have in this one patient some manic symptoms and some of the depressed phase.

Case 2. Mrs. M. C., admitted to the Hospital April 18, 1910; weight 99 lbs. Ears somewhat deformed, palate high and narrow. Nutrition poor. Mucous membranes pale. Thyroid easily palpated. Skin is dry and cool; hair dry; tongue heavily coated; breath offensive; bowels constipated; sordes on teeth; pulse 96; temperature normal. At no time was any cutaneous anesthesia demonstrated.

Her appetite was very poor; fed by persuasion and force. Would not drink water of her own accord; neither would she respond to the call of nature, passing her urine and feces in bed.

Three months previous to her admission she manifested an anorexia, which gradually increased until there was a marked loss in weight, later a depression developed with some agitation, walking the floor, wringing her hands, it being impossible for her to keep quiet. This condition increased; she was then brought to the hospital. At the time of her admission she was very resistive, especially marked on passive movements of the larger joints. It was necessary to restrain her in bed as she was up and about. Later, she became more quiet, would lie in bed quietly for a time but usually was picking at the bed clothing and, later, picked the skin off her face. The facial expression was neither depressed nor elated but at times suggested wonder. For a long time she would hold her head from the pillow as though she was listening. All of this time she was being fed by tube. She did not speak but when her home and immediate relatives were spoken of, she became somewhat emotional, her head would be turned toward the examiner with a marked increase in respirations, which suggested an adequate re-action in the emotional field. She continued to be somewhat restless, although never noisy. At times she peeped from under the pillow and bed clothing, suggesting a playful or elated mood; this, however, was only slight. In August she had improved to such an extent that she was allowed to have her clothing. She was taking nourishment of her own accord although, at times, by persuasion; was talking some in a whisper and showed a marked motor retardation. She would smile a great deal, standing in one position for a long time.

Her condition improved until December, when she showed insight into her condition, a clouding of consciousness and from all outward appearances seems to be recovered.

Some time (seven years) previous to her admission she had an attack of endometritis following child birth; during lactation she was very weak and anemic. This was given as a cause of her condition. From this and her physical condition one suspects very strongly confusional insanity or infective exhaustion psychosis. But, upon closer analysis of individual symptoms one is justified in classing this case as the mixed type of manic depressive insanity.

Case 3. Mrs. A. Y., admitted to the Hospital April 1, 1910, as a voluntary patient, during her third attack. She is 39 years of age.

As a child she developed normally, received her education in Germany, and at the age of 18 became governess in a private family and was there for a number of years. She was married eleven years ago and has two children. After the birth of the first child she began to worry and became depressed; was confined at a private sanitarium for one month and recovered. Eighteen months previous to her admission here she had an attack similar to the first, from which she recovered. The third attack began two months ago.

At the time of her admission she was very talkative, apprehensive and anxious; the face suggested depression; there was no motor restlessness; she talked about the top of her head being indented which caused sleeplessness. This continued until she was transferred to a disturbed ward. Her rest has been very much disturbed, sleeping two to three hours each night. The stream shows a flighty talk with a marked distractibility.

By the history of previous attacks and flight of ideas, along with a depressed mood, without a change in the motor sphere, we make a diagnosis of manic depressive insanity of the mixed phase. This case shows a clouding of consciousness with some loss of orientation as to time. Upon the surface involutional melancholia is suggested, but we see that the manic symptom, namely: flight of ideas, is present, while the depressed mood has been persistent, with no change in the motor sphere.

This lady gradually improved, and, upon request, was discharged Jan. 2, 1911.

Case 4. Miss H. E. S., admitted Aug. 1, 1910.

She was 28 years of age, and by occupation is a foreign missionary; has received a collegiate education. She had a remarkable record for work, and, as a result, suffered an attack of what is described as an acute mania, Dec. 23, 1909. Her appetite was variable, for the most part she was fed by persuasion, and, as a result of this, her emaciation became extreme. After returning to this country she was treated in her home for a period of seven months; her appetite became better, and she apparently regained her normal physical health. She did not recognize her home or family.

At the time of her admission she was quiet, showed a marked motor retardation, with an elated mood, a retardation of thought and a flight of ideas. The flight at times might have been overlooked; this, however, has been more marked at one time than another. The elated mood showed itself in the happy expression of her face, and, occasionally, she showed a playful attitude. Upon seeing her laugh "to herself" without apparent reason, one would think of a deteriorated case.

This patient has shown a marked clouding of consciousness, with a loss of orientation as to time, place and person, and, at times, has mistaken the nurses and physicians for someone whom she had previously met. Occasionally, she has had some fleeting hallucinations of sight and hearing; no delusions were elicited.

One might mistake this case for a dementia præcox but, upon a closer analysis of individual symptoms, one does not hesitate to class her as a mixed phase of manic depressive insanity.

The above conditions show: in Case 1, an involvement of the psychomotor sphere and intra-psychic sphere of consciousness. In Case 2, an involvement of the intra-psychic sphere wholly. In Case 3, some involvement of the intra-psychic sphere with, possibly, a somatic involvement. In Case 4, an involvement of the intra-psychic and psychomotor sphere, with a hyperactivity of some neurons and an abeyance of function in others.

These cases based on statistical symptoms might be wrongly classified, but a proper grouping of symptoms and a study of the individual cases leads to an altogether different classification.

It must be remembered that manifold transitions of the mixed group may be expected. The foregoing cases are conditions which might be transitory in the typical phase of manic depressive insanity, the symptom-complex lasting for months and weeks, showing itself throughout as a mixed type.

Many of these cases have, I believe, been regarded as dementia præcox, but later a typical manic or depressed attack shows itself, followed by recovery.

Often the incongruity of mood and thought are such as to suggest dementia præcox, associated with fantastic ideas and odd and peculiar

actions. It, however, is necessary to ascertain the history of the case, and have a consistent setting in which they occur.

The type of personality, the mode of onset, the exciting causes, etc., are important, as certain emotional reactions have entirely different origin.

From statistical data we learn that certain patients have certain symptoms with or without recovery, and by a purely schematic formula a few unimportant symptoms are raised to diagnostic importance.

The above is a good example of a statistical method. We learn from this how certain patients show certain symptoms, and how many recover.

The manic-depressive reaction, when observed in its simplest form, does not appear so much as a special disease of pathologic process, as an exaggeration of a condition belonging to our normal experiences (Meyer).

This prototype in normal life is found in the emotional variability and fluctuations in efficiency and capacity, which seem to be an intimate part of our makeup, although faintly developed.

When these emotional waves and fluctuations become sufficiently marked to attract attention, we recognize the patient as slightly abnormal; from the unstable individuals a transition to the milder types of manic depressive insanity seems plausible.

Simple mania and depression we can account for in certain biologic reactions deeply rooted within our makeup. We, as yet, do not know how to account for the peculiar dissociation and peculiar combinations that appear in the mixed form of manic depressive insanity.

A further analysis of the type of normal mental makeup may lead to a counterpart of the mixed condition.

Kraepelin has furnished us with a view-point helpful in the understanding of certain obscure clinical pictures, because it allows us to identify the unusual combinations and some mood abnormalities, thought disorder, and psychomotor reactions that we know and use as prognostic guides in the ordinary manic depressive attacks. A more careful analysis of these mixed phases is urged in order that we may recognize such clinical forms when they appear independently of typical manic or depressive attacks.

Further investigation of the types of mental makeup, out of which manic depressive attacks develop, is most important, and may throw light on the peculiar combinations of symptoms seen in the mixed phase of manic depressive insanity.

I am indebted to Dr. H. Douglas Singer, of State Psychopathic Institute, Hospital, Ill., for calling my attention to the differentiation made in Kraepelin's last edition between mixed states of manic depressive insanity and involutional melancholia.

I am also indebted to Dr. H. B. Carrel, superintendent Jacksonville State Hospital, for his kindness in permitting me to report and use the above cases, and also to Dr. R. T. Hinton, chief of staff.

NOTE.—This article was read before the Illinois State Hospital Medical Society at Elgin State Hospital, April 12, 1911.

INHERITED SYPHILIS *

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"For fate has wove the thread of life with pain,
And twins ev'n from the birth are misery and man."

Syphilis has been known and studied by competent observers for the past four hundred years; ever since Columbus returned from his voyage of discovery to what is now Santo Domingo, Hayti, when his crew introduced it into Italy, Spain and Portugal, from whence it spread as a blight over all of western Europe and back to America again.

With Santo Domingo as a starting point it has been traced across the Caribbean Sea and along the lesser Antilles to South America, beyond the Andes to Peru where archeologists find traces of its probable existence among the remains of the ancient symbolic pottery of a people which inhabited the land before the time of the Incas, and through legend to a time known as "Purumpacha," or "the time when there was no king"; in other words, to the neolithic age. One writer goes further and in his most interesting paper[1] of recent date offers a theory that it existed as the title of his thesis has it, "Before Speech Was," that is, in the trogloditic age, "Before Adam," originating through bestialities practiced by primitive man on the alpaca llamas of which his herds consisted. It has been said to have existed in Japan for fifteen hundred years, and syphilitic bones have been found in the mounds of a prehistoric people in various states of our own country, especially in Tennessee, while the translation of ancient Egyptian papyri dating back some seven thousand years show reference to what is apparently the disease at that time, that is, five thousand years before the Christian era.

The existence of a pre-Columbian syphilis in the "Old World" is, however, denied by many writers[2] and it was not until 1529 when Paracelsus first asserted that it occurred in an inherited form. Since that time this type has been generally known as "hereditary syphilis," but to-day other terms have been applied to it by writers who have objected, and rightly, to the term "hereditary." In this regard Lucas[3] seems to have summed up the matter most concisely when he says "of the three terms applied to this disease, congenital, hereditary, and inherited, I prefer the third. Congenital, beside being objectionable in form and suggestion, is not universally true. Hereditary suggests something that may be passed on indefinitely, while inherited implies only something derived from parents, as for example fortune or misfortune, which is detachable."

In the latter part of the eighteenth century inherited syphilis was studied by numerous French observers, and in the nineteenth century the works of Diday, Hutchinson and a host of others have left but little to be added to our knowledge of its symptomatology.

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* An address read before the Evanston branch of the Chicago Medical Society, Jan. 26, 1911.

1. Ashmead: Am. Jour. Der. and G. U. Dis., 1909, xiii, 552.
2. Block, Ivan: "A System of Syphilis" (Power and Murphy), 1908.
3. Lucas: Br. Jour. Der., 1908, p. 250.

Its pathology has been about completed by competent workers all over the world, and with the discovery by Schaudinn and Hoffman five years ago of the *Treponema pallidum* such a stimulus was given to the study of luetic infection and its manifold manifestations from all standpoints, that this too seems to have reached a state of almost accurate knowledge. Then followed the various serum tests as aids to diagnosis, and now the world famous "606," arseno-benzol, or salvarsan, has once more brought the honored name of Paul Ehrlich to the tongue of all civilization. In short, regarding syphilis, its etiology, symptomatology, pathology, diagnosis and treatment have, especially at the present time, been gone into so thoroughly, rewritten and revised and the results spread before not only the medical profession, but the laity as well, that now "he who runs may read."

It is with these facts in mind that I approach with some hesitation a topic so well and so universally understood, and fear that any paper that I may read on the subject will assume a tedious form.

The observation that syphilis occurs as an inherited disease in the truest sense of the word, and is transmitted to posterity as such, was made, as has been said, very early in its history and the accumulated experience of the years has but confirmed the truth of this observation.

The fact of the existence of the inherited type has never been questioned but the mode of its transmission has been the subject of many and bitter debates and many of the highest authorities are still far from being at one regarding some of the questions that have been propounded.

More especially is this true of the respective rôles played by the paternal and maternal organisms in the procreation of a syphilitic child. The well-known law of Colles and Beaumes states that "a child born of a mother who is without any obvious venereal symptoms, and which, without being exposed to any infection subsequent to its birth, shows the disease when a few weeks old, this child will infect the most healthy nurse whether she suckle it or merely handle and dress it, and yet this child is never known to infect its own mother though she suckle it while it has venereal ulcers of the lips and tongue."

It is a fact that very many mothers of syphilitic children remain without visible evidence of syphilitic taint throughout their lives, and are seemingly immune to luetic infection from any extraneous source. This apparently puts the onus on the male organism as the carrier of infection, and further infers that the placenta forms an impervious barrier to the disease, or at most allows it to penetrate in an attenuated form which is unproductive of symptoms.

The view that such mothers were not only immune but were also free from luetic taint was held by the majority of observers as late as 1903. In that year Matzenauer[4] in a paper read in Vienna in which he took a view diametrically opposed to that generally accepted, stated that it was his belief that there was no such a thing as direct paternal transmission of syphilis, that all inherited lues was through the mother, and that the immunity of such mothers was due to the fact that they themselves had

4. Matzenauer: Wien. klin. Wchnschr., 1903, xvi, 175.

latent syphilis. These statements he backed up with some very cogent reasoning, but his ideas were very far from being accepted at the time. The discussion of his paper occupied six sessions of the society before which it was presented, and such eminent authorities as Neumann, Finger,[5] Kassowitz, Hochsinger and others bitterly opposed the principles which he had laid down, quoting case after case from their inexhaustible clinical material in their arguments against what one of them termed "secession" from accepted tradition.

Nevertheless, though Matzenauer's conceptions have become more and more generally accepted, there are many points which still await complete elucidation. In 1908 Lucas[5] in an address before "The Society for the Study of Diseases of Children" in England, taking the same ground as Matzenauer, said "to my mind inheritance from the father alone is now put entirely out of court, and it follows that the infection of a mother by her fetus can never occur, for how is it possible that a spirochete whose length averages that of the diameter of a blood corpuscle can penetrate an ovum one-two hundredths of an inch in diameter and multiply without destroying it? I lay it down as an axiom, that inheritance is invariably from the syphilized mother. This is supported by Colles' law."

He says further: "It would seem that when virulent the spirochetes penetrate the chorium or placenta and occasion miscarriages, macerated fetuses or premature birth; but when the virus is attenuated by time or treatment, the placenta forms a complete protection to the developing fetus, and it is the separation of the placenta at birth which allows infection to take place through the umbilical vein. Hence the regularity of the secondary exanthemata from a fortnight to three months after birth. In these cases the separation of the placenta is the first stage and corresponds to the chancre of acquired syphilis."

And again: "It is obvious that as the greater cannot be included in the less, a spirochete cannot be carried in a spermatozoon, but this does not exclude the possibility of its being conveyed by the fluid part of the semen."

Without attempting to express any personal opinion regarding these various arguments, it may be of interest to mention the fact that recently so-called "dark bodies" have been observed in syphilitic serum. These are supposed by some to be a quiescent state of the treponema. If this hypothesis prove true they may be found to play a not unimportant part in bringing about seemingly paradoxical conditions.

It is also of interest to note that Wassermann tests of the blood of women who have borne luetic children have been positive in almost every case. Irrespective of the manner of the transmission of syphilis to the unborn child, the fact remains that transmission does occur, and if the mother is syphilitic it is sure that her child will be. If the father is, the child in all probability will show signs of the disease sooner or later. In any event, this heritage occurs altogether too frequently and a most terrible legacy it is.

5. Discussion, ibid, pp. 220, 263, 292, 325, 363, 392.

As is well known, women with untreated and active syphilis whose disease dates from the time of conception, or from any time within seven months after pregnancy is a fact, will abort at various dates following infection. The earlier the infection, the sooner will abortion occur, and each succeeding conception will be carried nearer to term until at last a viable child is born and there comes into the world a living human being, to be sure, but if the infection of its mother has been a severe one, a most hideous caricature of that most lovable creation, a clean, healthy human baby. Its face will be drawn and old looking. Lines apparently representing the accumulated cares of a ninety years' struggle in the clutch of circumstance will seam its face and brow. Its color will be either a dull, cachectic brownish-gray, or a livid bluish-red tinged with copperybronze in certain areas. Its hair, what there is of it, will be thin and dry; when it attempts to cry, its voice sounds like that of some tiny animal in distress and is hoarse and unnatural, being scarcely audible across the room. The umbilical cord refuses to become dry, and shows signs of gangrene. Fissures appear at its attachment, which bleed and ooze. Large patches of epidermis exfoliate from the skin of the abdomen and the inner sides of the thighs, leaving raw, moist surfaces which must be exceedingly painful and tender. It cannot nurse or even breathe in comfort, and in a few days it is dead, much to the relief of all concerned, and another life has been added to the list of those who have had to pay for the "sins of the fathers." This picture represents the worst phase, the macerated, moribund and yet half-living child whose short life presents but one redeeming feature, which is that in all probability it never realized how utterly wretched it was.

The next conception by the mother of such an infant, even though she receive no treatment, and especially if the father is receiving thorough antisyphilitic medication, will, as a rule, result in the delivery at term of an apparently healthy baby that nurses without difficulty and whose cries are those of a normal child. In the course of a few weeks, however, or at most a month or two, the baby "takes cold." A slight elevation of the temperature is noticed, and there is more or less mucopurulent discharge from the nostrils. In nursing it must let go of the nipple to catch its breath, and it "snuffles" when it cries and when it sleeps. A diarrhea that is not easily controlled sets in, and the child becomes peevish and fretful, loses weight and shows a very apparent lack of nourishment.

At this time one of several things may happen which will give the clue to the cause of all this disturbance, provided it has not already been recognized, as it frequently is not, for syphilis has a way of cropping out in the most unexpected of places, and in persons who least suspect it. Usually the skin is the next organ to which attention is called. An eruption appears somewhere on the body or limbs of the unfortunate child, the character of which differs with the date of infection in respect to the time of conception, and with the virulence of said infection in the individual case. The more serious from the standpoint of prognosis are the bullous and pustular forms. A vesicular type is occasionally seen but is comparatively rare. While bullæ are seldom in evidence in cases of

acquired lues, they are the rule rather than the exception in the inherited form. Although this type of lesions may appear as a more or less scattered, generalized eruption, they are usually localized on the palms, soles and about the genito-anal region. They vary from two to four centimeters in diameter, are somewhat flaccid and contain clear or turbid fluid with an occasional admixture of blood. They are surrounded by a slightly inflammatory halo and as they break down may assume the characteristics of superficial ulceration, or dry up leaving the skin surface showing the signs of recent desquamation, tense and shiny and of a deep red color. Coincident with these there develop on the buttocks and over the inner surface of the thighs, about the genitalia and on the lower part of the abdomen, a number of rather large flat papules of a dull coppery-red, somewhat ill defined in outline and not raised to any great extent above the surface. These papules are usually accompanied by an erythema somewhat lighter in color, with which they blend, forming a broken sheet of inflammation extending over the regions mentioned. Again they may remain discrete, and becoming macerated by constant moisture from natural excretions, form the so-called "mucous patch of the skin," the condylomata lata or flat warts, which next to the true mucous patch are perhaps the most virulent of all specific lesions, that is, the most prolific source of danger to others.

In cases of less virulence a typical roseola identical with that of acquired lues may appear, but with by no means the same frequency is it observed. The small papular syphilids are also seen with more or less frequency and differ in no wise from those seen in adults except that they may be somewhat lighter in color and exhibit a less degree of induration. The pustular lesions in early inherited syphilis are seldom seen and when they do occur resemble those of the acquired form, and also like them make a very bad prognosis necessary.

If the child survive the stage of these eruptions, as is frequently the case even without efficient treatment, the next thing to call attention to the disease will, in all probability, be a gumma somewhere or a destructive process attacking the periosteal or subperiosteal tissues. These lesions do not differ essentially from those seen in the adult and may of course be located at any point. Frequently it is the phalanges that are attacked and the so-called syphilitic dactylitis occurs, which if it is not aborted by active treatment results in the loss of a joint and a useless finger. Gummata of the pericranium are not infrequent and occasionally small nodular or gummatous lesions make their appearance on the forehead, cheeks or other part of the face, and if untreated run the usual course of growth, softening and breaking down, followed by healing with permanent scar formation. During all this time there are lesions which attack the mucous membranes of the mouth especially, and occasionally those of the genitalia and doubtless the lining membrane of the intestinal tract as well. These correspond to the stage of the disease elsewhere. They may be, and usually are, of the type of the ordinary mucous patch,

but extensive ulceration of the tongue, soft palate or nares sometimes supervenes and always leads to permanent disfigurement. These then are the pictures of infantile syphilis of the inherited type:

1. Partial maceration of the new-born with semi-moribund condition and early death.

2. Apparent health at birth but within the first three months, snuffles, bullous or vesico-pustular lesions especially of the palms and soles, followed by various other lesions, diarrhea, cachexia and death.

3. Macular or small papular eruptions occurring somewhat later and unaccompanied by more serious lesions, making a more hopeful prognosis possible.

4. Recurrent forms appearing in children whose early symptoms have been so slight as to pass unnoticed, or if seen their import not being appreciated, were neglected, i. e., nodules, gummata and deep ulcerations chiefly of the face, head and long bones, especially the phalanges and tibia, leading to permanent deformity.

When the child with inherited syphilis has passed the age of infancy, having successfully withstood the attacks of the disease, and by means of care and proper treatment has seemingly recovered from its various troubles, there comes a period of quiescence, and it is not until it nears puberty that attention is again called to the specter of disease which overshadows it. Usually the individual is of stunted growth, poor mentality, and late in coming to maturity both mentally and physically. When the second teeth appear the central incisors are notched, and form the picture of the well-known "Hutchinson teeth"; linear scars, the remains of preceding lesions, radiate from the corners of the mouth, interstitial keratitis, and disturbances of the inner ear are of common occurrence. The nose may show the lack of a bridge and be of the "saddle" variety, and perhaps one finger has a terminal phalanx which dangles as a useless appendage at its tip.

Puberty in both sexes is late and may never take place normally, as the sexual organs fail to develop. The skin is thick and opaque, the forehead large and protuberant, sometimes showing a furrow above the brows. The hair is thin and dry, the nails fragile and easily broken, while the tibiæ exhibit the forward bowing known as "saber formation." Affections of the nervous system are of frequent occurrence. Fusiform enlargements of one or more nerves accompanied by motor paralysis, wasting and anesthesia of the parts involved is seen. Paralysis of the cranial nerves, hemiplegia from the endarteritis which is part and parcel of the entire disease, epilepsy, idiocy and juvenile dementia are some of the more serious sequelæ. I will not attempt to picture these various pathologic conditions in detail, nor would it be possible for me to do so in this short paper. A bare outline of the symptomatology of inherited lues is all that I wish to present, and now permit me to add a few words that may perhaps brighten some of the more somber tints that I have been forced to use in my brief epitome of this most terrible affliction.

First, in regard to the present frequency of inherited syphilis: disregarding the oft-repeated statement that the entire human race is now nearly completely syphilized, a statement incapable of proof no matter how much truth there may be in it, and I think that there is a great deal, it is my belief that the ratio of 18 to 20 per cent. of the entire population suffering from syphilis is to-day too great. In a paper recently read before the Chicago Medical Society, the essayist stated that there were two million *known* syphilitics in the United States. I do not know where he obtained his data as these are notably hard to come at through the fact of the disease being never reported when it is possible to conceal it, the only dependable statistics being those of the insurance companies in their actuary tables, which of course cover but a small proportion of the population. But assuming that his figures are correct, and placing the number of unknown and hidden cases at eight million, this makes the percentage at ten and not twenty, the total population of the country being about one hundred million. Of these the very large majority is of the acquired type, and among those so afflicted comparatively few, let us hope, knowingly reproduce the disease in their children, and in the ignorant, criminal or careless ones the results of treatment are daily showing, so that there are fewer dead-born and of the living a gradually decreasing number who show the indelible stigmata herein referred to.

In the second place, much might be said in regard to the diagnosis of inherited lues apart from laboratory methods. Not every baby born with a bullous eruption is luetic. The bullæ appearing in infancy may be, and most likely are, due to an infection with the ordinary staphylococci, an impetigo vulgaris, or they may be the expression of an urticaria bullosa, and if they appear a little later in life when slight traumatisms are apt to occur to the hands, feet and knees, the inborn condition of epidermolysis bullosa hereditaria may be discovered. An attack of erythema bullosum, while it is not frequent in childhood, is by no means unknown. The erythemato-papular eruptions about the genitalia may be merely an eczema intertrigo or a dermatitis caused by the irritation of the tender skin by acid excretions.

The macular lesions caused by various drugs, the administration of which has been made necessary by some other cause, have frequently been diagnosed as a syphilitic eruption, and a cankered sore mouth for mucous patches. The appearance of extreme age coupled with cachexia and an abnormal color is quite as characteristic of marasmus from any one of a variety of causes as from lues. Even the Olympian forehead, the notched teeth and the scaphoid scapulæ of recent notoriety, can and do come from malnutrition, be the underlying cause what it may, apart from the ravages brought about through invasion of the living organism by the *Treponema pallidum*. Therefore, the diagnosis must be made from a complexus of symptoms and not from any one alone.

It is of interest at this point to note the results of a series of experiments which have been recently carried out and which illustrate some of

the statements just made. The medium in which tubercle bacilli had been grown was filtered through a germ-proof filter and introduced in less than lethal doses into the circulation of guinea-pigs, in order to observe the effects on the young produced by animals so treated. When the male alone was inoculated previous to his mating with the female, the resulting brood had one or two dead-born, and of the remaining young one or two were feeble and sickly. When the female alone was injected the results were the same except that the number of dead-born was greater, and the number of healthy living young was but one or two out of a litter of six or eight. When both male and female were the subjects of experiment the effect on their progeny was not greatly different from that obtained by treatment of the female alone. The analogy here presented between these experiments and the various problems brought to mind by the study of the symptom-complex of syphilis is certainly suggestive.

I have purposely omitted all reference to the manifestations of visceral syphilis in its inherited form as its consideration would lead me too far afield. Neither will I say anything regarding its general pathology; and as the treatment of inherited lues is but that of the acquired type modified, there is no necessity of mentioning it.

Regarding the question as to whether syphilis can be transmitted beyond the second generation, the answer cannot be given categorically. The general consensus of opinion seems to be that it cannot. Gaucher, however, presented a paper[6] in 1907 in which he classed a number of affections such as adenoids, etc., as "quaternary syphilis." These suggestions were not taken seriously. Fournier has collected 116 cases, fifty-nine of which he thought were to be relied on as showing transmission to the third generation. The literature of the subject, however, teems with cited instances which seem to prove the contrary.

In conclusion it is perhaps permissible to make a general prognosis; and, recalling the fact that syphilis is to-day far from being the scourge that it has been in the past: whether this is due to the syphilization of the entire human race, or to the results of treatment which are beginning to show, is immaterial and the fact remains: it is my opinion that while I personally do not expect to live to see the day when there will be no such condition as that which has been announced as the title of my paper, I do believe that that day will come, and that with the gradual but sure advancement of knowledge along lines similar to those which have recently been made clear to us, syphilis will in time become an almost negligible disease in respect to mortality and heredity and will be confined to those who must suffer for their own indiscretions, while the innocent and the unborn will no longer be made to pay for the transgressions of others.

6. Gaucher: Trans. Int. Cong. Der., 1907, p. 777.
7. Zeisler: Ill. Med. Jour., October, 1910.
8. Heller: Berl. klin. Wchnschr., 1909, xlvi, 1315.
9. Grindon: Jour. Cut. Dis., 1910, xxviii, 284.

DIPHTHERIA*

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Diphtheria is an acute specific infectious disease which usually begins in the throat or upper air passages, but which may attack any mucous membrane or even the skin, and is characterized by the deposit of a yellowish or grayish yellow adherent membrane which is due to a specific microorganism known as the Klebs-Loeffler bacillus, and by certain other constitutional symptoms due to toxins elaborated by their growth.

Diphtheria was known to Hippocrates, and Asclepiades, 100 B.C., performed the first tracheotomy, while to Bretonneau we owe the first classical description, from whose writings has evolved its terminology, which literally means membrane.

The diphtheria bacillus was isolated, described and cultivated by Klebs and Loeffler in 1883 and 1884. It is 2 to 6 microns in length and 0.2 to 0.6 microns in width. It stains by all the anilin dyes and is Gram positive, but stains best by Loeffler's alkalin methylene-blue. The bacillus is naturally aerobic, that is, grows best in the presence of oxygen, but may grow in the absence of that element and is therefore termed a facultative anaerobe. It is negative in many of its biologic characters, being non-motile, non-flagellated and non-sporogenous and will grow on all artificial media but best on blood-serum. It grows best at body temperature and dies at a thermal death-point of 58 or 60 C. It is easily killed by disinfectants and succumbs to direct sunlight in a few hours.

Diphtheria along with tetanus should be classified among the toxic diseases. As a matter of fact the symptoms met with in cases of diphtheria are due to the effects of the toxins secreted by the bacilli and taken up by the circulation, and not to the presence of the organism in the blood as maintains in typhoid, pneumonia, etc. This has been proved by the absence of the germ in the blood of those sick with diphtheria and by the absence of the organism in the distant organs of those recently dead of the disease.

Furthermore, Roux and Yersin by the filtration of cultures through unglazed porcelain have been able to separate from the bacilli a toxalbumin not wholly unlike the toxalbumin found in the venom of poisonous snakes, but less rapid in action, and which injected under the skin of rabbits and guinea-pigs produces the blood-poisoning, kidney and nervous symptoms found in true diphtheria.

Roux and Yersin further demonstrated that, when a fatal dose of the toxalbumin or of the virulent cultures was injected subcutaneously, marked prostration with an elevation of temperature of two or three degrees F. rapidly followed, accompanied by, first, a slowing of the heart beats due to vagus irritation, and later, by a rapid irregular heart beat and death due to vagus paralysis; but, if the injection falls short of a fatal dose, the paralysis does not occur or occurs much later and usually

* Read before the Saline County Medical Society, ??????

affects the nerves of the extremities, deglutition or accommodation. So it follows, as an obvious fact, experimentally as well as clinically, that diphtheria is a toxemia and that the toxins have a selective action for certain motor nerves with a tendency toward paralysis whether or not the case be mild or severe.

To this end therefore, Professor Behring conceived the idea of introducing into the blood of those infected, an antitoxin which neutralized or caused to be neutralized the deadly toxins with which the blood was teeming, by developing antibodies which combined with the toxic bodies in an innocent and harmless combination which will be discussed more thoroughly in its proper place.

Now that a definition and the true nature and character of diphtheria has been considered we may with propriety turn to the etiology. Aside from the direct etiologic factor which is the Klebs-Loeffler bacillus as before stated, we may consider the indirect or predisposing causes.

In most large cities the disease is endemic and is occasionally agitated by outbreaks of epidemics of more or less severity. In country places it prevails almost solely as an epidemic having arisen in some inexplicable manner and, before its nature is recognized, many persons are exposed. Diphtheria does not arise sporadically and every case has its origin in a previous case either directly or indirectly.

The bacilli may enter through the inspired air; they may be taken into the mouth with toys or other articles; by kissing or the filthy habit of chewing gum after others, frequently practiced among school children; by the public drinking cup, too often seen in schools and other public places.

Direct infection is the cause in the great majority of cases and is usually disseminated by those recently recovered from the disease or those suffering from a mild and unrecognized attack. These facts are proved by the presence of virulent bacilli in the mouths of those convalescent for several weeks after the disappearance of the membrane and all other symptoms, and by the presence of virulent germs in the nose and throat of those suffering from what seems to be a simple rhinitis or catarrhal pharyngitis. In reality these cases have a diphtheritic infection and are going about scattering, as it were, everywhere, in the school room and the churches, on the streets and in private homes, the seeds of an approaching epidemic.

Indirect infection is not uncommon and may occur as before stated, through the use of toys, books, clothing or the bed of the patient; from carpets, furniture, wall-paper or hangings of the sick-room. Diphtheria may be carried by a third person, but rarely except by one who has been in close contact with the patient, as the physician or nurse. The frequent attack of physicians and their families and nurses during epidemics bears witness of this danger.

Diphtheria prevails during the whole year, but is more frequent during the school, church and theater seasons, which has given rise to the idea that it predominates during the cold months.

Girls are much oftener attacked than are boys, which at first thought would lead one to believe that the female sex is more susceptible than the male, but which in reality is due to the closer contact of the former to such patients, their clothing, bedding, and the sick-room.

Individual susceptibility and resistance are important predisposing factors. Some are exceptionally predisposed and contract the disease on the slightest exposure while others may be in constant attendance on those suffering with the malady and as constantly resist infection. This we term "natural immunity." Very important predisposing causes are chronic catarrhal inflammation of the nose and throat, adenoids, enlarged tonsils, cavities of carious teeth and other infectious diseases: as scarlatina, measles, pertussis and mumps. The period of incubation is from two to five days and immunity is short, not lasting longer than from two to five months.

The symptoms of diphtheria depend on the location of the disease and the severity of the attacks, ranging from a slight rhinitis or pharyngitis with little or no membrane and void of possibly all constitutional symptoms, to a severe fulminating type characterized by the production of a dirty, heavy, necrotic membrane which has a tendency to spread rapidly to other parts and which has a fatal ending in twenty-four or forty-eight hours by toxemia or laryngeal stenosis.

As physicians, these two extremes are not often seen by us, or if seen, there is little time left for much effective work or observations; therefore our experience must of necessity be limited to those cases coming between these two extremes, so to this end I shall endeavor to discuss the symptoms of nasal, postnasal, tonsillar, pharyngeal and laryngeal diphtheria respectively. First prefacing their separate description by the assertion that the constitutional symptoms such as paralysis and parenchymatous degenerations of the internal organs may and often do follow the milder as well as the severer forms and are due solely to the action of the toxins and have very little, if any, relation to the presence or absence of a distinct membrane but which may to the clinician on physical examination reveal only a red granulated, necrotic looking surface.

Nasal and postnasal diphtheria may be and often are of the benign or milder type and may in children of school age attract very little attention, the patient being permitted to continue in school scattering as it were everywhere, in a suitable soil, the seed for an extensive epidemic. Diphtheria of the nose may be primary or secondary. The upper lip is red and excoriated by the irritating discharge. The child "snuffles," sleeps a great deal and takes food poorly. The glands of one or both sides of the neck are swollen. Nose-bleed occasionally takes place or a thin, bloody discharge is noticed on the handkerchief. A membrane when present is usually situated on the septum but may involve the whole Schneiderian membrane and may be removed or blown out as a complete cast of the nose. The nasal occlusion is at first often thought by the parent to be due to a cold in the head or a foreign body in the nose. The fever may be slight, especially in older children, and the whole clinical course be one of a benign type, ending spontaneously in a few days, or it

may be malignant from the first and terminate in death scarcely before the child is suspected ill.

To tonsillar and pharyngeal diphtheria a symptom-complex is common and in a case of ordinary severity the child for a day is listless, has loss of appetite and often vomits whatever he eats. At the end of this time sore throat is usually complained of and a temperature of 100 to 102 F. is noted which is in striking contrast to the higher temperature of 104 or 105 F. of a strepto-, staphylo-, or pneumococcic tonsillitis or pharyngitis and which is more often preceded by a chill rather than chilly sensations. The pulse is accelerated, ranging from 100 to 120. Renal and intestinal elimination is scanty and retarded. Nose-bleed is not uncommon even where there is no involvement of the nasal passages.

The glands at the angle of the jaw are usually slightly enlarged. When the child is old enough, headache and pain in the back and limbs are usually complained of. The face may be flushed or cyanotic, depending on the degree of toxemia, and a rash sometimes appears resembling scarlet fever in some cases and measles in others. These symptoms occurring in a child usually suffice to call the attention of the physician to the throat and an examination is made which usually, but not in all cases, reveals the presence of yellowish or grayish-yellow membrane on the tonsil, posterior pillar, soft palate or pharynx and which is adherent and leaves a raw bleeding surface when removed.

The milder forms are not often seen by the doctor or if seen are too often treated as simple sore throat and permitted to run at large, feeding as it were with oil the conflagration of an epidemic which we are trying to extinguish. In the severer forms, the child is suddenly prostrated, but the temperature is not much above 102 F. and the pulse ranges from 140 to 160. The skin is dusky or dingy blue, due to vaso-motor paralysis from an overwhelming toxemia. He sinks into a stupor or comatose condition from which he is aroused with difficulty. There is a sweet, sickening, foul odor on the breath which every clinician of experience cannot fail to discern.

Laryngeal diphtheria may be primary but is generally secondary to a pharyngeal or postnasal diphtheria. When secondary to a diphtheritic pharyngitis or rhinitis it is a part and parcel of those conditions plus the addition of the laryngeal symptom which will be presently described. One of the first symptoms noticed in a laryngeal involvement whether primary or secondary is a cough which has a characteristic dry, brassy ring which is far more easily recognized than described. This cough is accompanied by hoarseness which deepens with the approach of night. At first both the cough and the hoarseness may disappear or be less marked during the day, only to return with greater intensity during the next night. Dyspnea now becomes a prominent symptom and, unless relieved or the membrane formation is but slight, cyanosis soon develops. Now the patient is aphonic, very nervous and anxious; the facies is characteristic, pale, pinched and haggard with an expression conscious of approaching death. The accessory muscles of respiration stand out like whip cords and the intercostal spaces move in and out with each respira-

tion. Convulsions and spasms are common. The child gradually sinks into coma and cyanosis deepens. The pulse accelerates, respiration becomes short and gasping and death closes the scene.

The diagnosis of diphtheria is not always an easy matter for the clinician's consideration, so to this end state and municipal boards of health have established laboratories and bureaus for diagnostic purposes and furnished at public expense laboratory facilities for those physicians who do not possess such advantages or who from lack of time cannot go into such minute differentiations. Therefore it goes without saying that, while the clinical signs just previously described under symptomatology and almost always present in a varying degree and are highly suggestive, they are *not* positively diagnostic. No diagnosis can be positive without bacteriologic proof of the organism in the throat, nose or other mucous membrane of the case in question. Nor does the finding of virulent bacilli in the nose, throat or on other mucous membrane of a healthy individual conclude the diagnosis of a diphtheritic infection, for as previously stated, virulent germs may and often do remain in the throat and nose of those recently convalescent for months after recovery. And pure cultures have been made from the throats of perfectly healthy individuals. Then what constitutes a diagnosis of diphtheria?

To answer this question intelligently and thoroughly would necessitate a complete rehearsal of the etiology, pathology and symptomatology of diphtheria in all of its forms and locations from the slightest benign nasal infection to the most malignant throat and laryngeal involvement. So, to spare you this trouble, I shall venture the assertion that no clinician will err to any appreciable degree in his diagnosis if he depend on the three groups of *findings* which I am about to relate and that the absence of either of the *three* will absolutely negative a diagnosis unless there be an obvious reason for the absence.

The three groups of findings to which reference is made are, first, the constitutional symptoms of toxemia as previously described; secondly, the local findings on the mucous membrane which is a necrosis of the upper layers of the mucosa with or without a membrane, and, thirdly, by the microscopic finding of the Klebs-Loeffler bacilli from a smear or culture.

A differential diagnosis is to be made from acute tonsillitis, streptococcic pharyngitis, pneumococcic sore throat, mucous patches of secondary lues and mycosis of the pharynx.

The differential diagnosis between acute tonsillitis and diphtheria is as follows: in the former, the onset is sudden, usually with a chill followed by high fever, 103 to 105 F., while in diphtheria the onset is gradual, usually without a chill. The temperature is not so high, ranging from 101 to 103 F. Vomiting is common.

On examination of the throat of a patient suffering with acute tonsillitis you will see the tonsils much inflamed and enlarged. The tonsils may show the presence of a false membrane which does not pass from the tonsils to the pillars or fauces and which can be removed easily with a swad leaving a smooth, clean surface. The membrane does not reform

when removed and is limited to the tonsil. In the mouth of a diphtheria patient you will see things quite different; the tonsil is not usually much swollen and there is not so much hyperemia as is seen in tonsillitis, especially about the soft palate. The membrane is found to be very adherent; if removed it leaves a raw, bleeding surface and rapidly reforms again. The membrane may also be found extending over the pillars to the soft palate or even on the posterior pharyngeal wall, which condition never happens in tonsillitis. A bacteriologic examination in acute tonsillitis will reveal the staphylococcus, streptococcus, pneumococcus or the pseudo-diphtheria bacillus, while in diphtheria there is always found the Klebs-Loeffler bacillus.

Diphtheria must be differentiated from streptococcic and staphylococcic sore throat so often seen in scarlatina, measles and other infectious diseases of childhood as well as in adults. The membrane formation is almost identical with that of diphtheria in that it is firmly adherent to the mucosa, but the symptoms are much more alarming, the pain is more intense, the soreness is more marked and the temperature is higher, ranging from 105 to 106 F. A bacteriologic examination is the only way to differentiate between these two conditions.

The mucous patches of syphilis have more than once been mistaken for diphtheritic exudate. But the symmetrical situation of the patches and their filmy character, the long time the sore throat has existed, the enlargement of the suboccipital and femoral glands as well as those at the angle of the jaw, the presence of a syphilitic rash and the falling of the hair are sufficient to differentiate the two conditions. Where doubt still exists a bacteriologic examination will settle the question.

In mycotic disease of the pharynx careful inspection under the light of a head mirror will show the whitish elevations studding the mucous membrane, each a separate elevation, and not confluent, as maintains in diphtheria. There is seldom any rise in temperature or any other constitutional symptom. Bacteriologic examination fails to detect the Klebs-Loeffler bacillus but shows the branching heaps of the mycelium *Leptothrix buccalis*.

As to prognosis we should be very reserved, for mild cases of diphtheria may suddenly and very unexpectedly take on a malignant and virulent form, and on the other hand those cases which seem hopeless at first may abate in a few hours and a speedy recovery follow. The severity of the epidemic and the prevailing type of the disease should also be taken into consideration before passing opinion as to the termination of the case. In some years the type is a very mild one and the death-rate is not more than 5 per cent., while in other epidemics the death-rate is 30 to 40 per cent.

There is no disease in which early, prompt and efficient treatment so favorably affects the prognosis as in diphtheria. Therefore, let us urge that time, which may be so valuable, be not wasted in waiting for further developments before treatment is begun. Nor be too hasty to dismiss a case of sore throat as acute tonsillitis or pharyngitis until you have first

assured yourself that you are not merely guessing or playing a game of chance in which the wager is the life of an innocent child.

The prognosis is always more grave in laryngeal diphtheria than in any other form and in those under the age of three, than in older children. But it matters not whatever be the condition the prognosis is always more favorable when the antitoxin is used than when it is not, and it has been conclusively shown that when the antitoxin is used early, say within the first thirty-six hours, the mortality is practically *nil*, but rapidly rises after the second day and seldom does any good after the sixth or seventh day.

The treatment of diphtheria is the antitoxin *per se* and is not a means of last resort as is so commonly supposed by the laity. For the sake of order and convenience of description I shall present this subject of my paper under four general heads: viz., prophylactic, specific, local and constitutional treatment.

By prophylactic treatment we mean the isolation of all cases by a rigid quarantine until the patient is fully and completely recovered and is free from virulent germs in the throat and nose. By thorough and effective fumigation of all apartments used by such patients before being occupied by others, and an immunizing injection of Behring's serum to all children exposed.

As before stated the serum treatment for diphtheria is the treatment *per se* and should be administered to each and every case regardless of its mildness or severity, location of the membrane or the age or condition of the patient.

The time at which specific treatment is begun must be early, preferably the first or second day of the membrane if the best results are to be expected. But the quantity and frequency of the dose may vary with the doctor and his patient. Some physicians in an ordinary case give only a single injection while others give two, three or more doses. The number of units for a single injection will vary as stated with the physician and the age of the patient and range from 500 units to as many as fifteen or twenty thousand units. But the dose of antitoxin cannot be measured in units, so it has been my custom to start with the maximum dose and repeat the same every six, eight or twelve hours until the membrane begins to disappear and the constitutional symptoms begin to abate. And when given prior to the third day of the membrane it has been my good fortune to meet with happy results indeed! So I should not hesitate to repeat the maximum doses until effects were obtained whether it be 1,000 units or 100,000 units were given in a given case. As years go on additional experience declares a revelation no less divine than God Himself in this gift of Professor Behring to science for suffering humanity. There is no longer reasonable ground for skepticism on the part of intelligent physicians against the use of diphtheritic antitoxin in the treatment of that once dreaded malady.

The local treatment consists of a direct hand to hand combat with the offending intruder and aims at exterminating his species as soon as possible and rendering those that persist in propagating their kind less

vicious in their habits. This is accomplished by the use of antiseptic washes, gargles and sprays, all of which tend to accomplish the same purpose as illustrated above. For this the pharmacopeia offers us an extensive variety for selection, ranging from a weak solution of boric acid and H_2O_2 to the more destructive caustics.

The ones most potent for good and less baneful for harm are Loeffler's solution, mercuric chlorid 1 to 1,000, phenol 3 per cent., the standard alkalin antiseptic solution (Casselberry) and hydrogen peroxid 50 per cent.

The constitutional treatment is obtained by absolute quiet and rest in bed in a comfortable, quiet room. A liquid diet, as milk, beef juice and soups, is generally recommended, but I am in the habit of allowing almost any wholesome food in small quantities which the caprice of their appetite may demand. Whisky in the form of warm toddies, I believe to be excellent, especially if the heart seems to lag or the digestion becomes fickle.

The complications and sequelæ most likely to occur are bronchopneumonia, paralysis, myocarditis and nephritis, and are treated as if originating from any other cause.

WHY THE VERMIFORM APPENDIX SHOULD USUALLY BE REMOVED WHEN AN ABDOMINAL INCISION MADE FOR OTHER CAUSES IS AVAILABLE AND THE CONDITION OF THE PATIENT ADMITS OF THE ADDITIONAL OPERATING

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According to the embryologists, among others notably the observations of Professors Mall and Max Broedel on fifty-four human embryos detailed in the work of Kelly and Hurdon,[1] the vermiform appendix is a part of the embryologic cecum which this organ has discarded, dropped from development and has been trying to get rid of since about the eighth week of intra-uterine life, but has unfortunately succeeded in doing so only in rare instances. At that time the transient appendix, a small bud at the end of the primitive cecum, disappears while the upper or proximal portion of this cecum begins to expand to form the future true cecum and leaves its distal portion undeveloped as a superfluous part destined to obliteration or to form the well-known mischief-maker. A structure thus discarded lacks the vitality, hardihood and capacity to ward off diseases that come to an organ that renders a regular service. An organ that does this will not be found, as Horsley[1] says, to vary so extremely in its size, shape, consistency, composition, position and blood supply.

1. Kelly and Hurdon: The Appendix and Its Diseases.

That it has no known function and that it is hardly possible that any real function will be generally accredited to it in future, is evident from the uniform and undisputed experience with thousands of cases, that its removal is entirely and always innocent of any known harmful effects, but is followed in most instances by improvement of some kind. Nowick[2] made one of the best studies of the appendix by most careful and systematic macro- and microscopic examination of 420 post mortems and eighteen post-operative specimens, and by noting, in conjunction therewith, the chief points in the clinical history of many of them. He likens the appendix to the tonsil in composition and action, because it contains much lymphoid structure in its walls. E. M. Corner[3] thereupon calls it the "intestinal tonsil" and attempts to ascribe to it the function of absorbing and annihilating the many microorganisms that infect the cecum. But he contradicts himself at once by saying that "when it is removed, its function is taken by neighboring tissues, and Nature is relieved of a tube containing actively poisonous material." Assuming that this tube does take care of some of those noxious elements, its service can be but as a drop in the bucket when compared with the amount of such service that is needed there. Theoretically, there is hardly a more serious menace conceivable than the confining of such lymphoid tissues within a tube whose trophic conditions are subnormal and whose lumen communicates by a narrow opening with the intestinal lumen at a point where bacterial flora of the latter are most abundant and dangerous.

Such a thing would resemble a bomb more nearly than an organ, as part of a healthy body. That this picture is not greatly overdrawn is evident from the sudden, severe and disastrous course so frequently observed in cases of acute infection of the appendix, leading in a day or two to gangrene of it or to perforation and extended peritonitis—conditions no less serious than obtain in cases of strangulated herniæ and requiring, as best relief, equally prompt and good emergency surgery which is often not available. Why then wait for the need of this in one case more than in the other! To be thus overtaken by either of these deadly freaks of disease spells disaster, such as is familiar to every surgeon and intelligent general practitioner; while but one in several hundred of the same men will meet a case where the appendix comes into consideration for real use as in appendicostomy. Appendicitis occurs so very frequently. The chances for an early diagnosis and operation are often so meager, and the loss to the patient in a late operation in rate of mortality, degree of morbidity, need of prolonged drainage, tedious convalescence, liability to hernia and trouble from intestinal adhesions later on is so great that any one who fully understands the subject may be expected to prefer to have his or her appendix removed at the first incidental opportunity for doing it safely. But, aside from the more striking phenomena incident to acute appendicitis, about which physicians and the public have become pretty well educated, there is a wide domain of at least functional disorders of the organs of digestion and assimilation in which the

2. Virchow's Arch. f. Path. Anat. u. Physiol., Feb. 2, 1909, S. 177.
3. Ann. Surg., October, 1910.

"chronic appendix" has in recent years been discovered by many observers as plying its stealthy and baneful influence. "Appendiceal dyspepsia" is spoken of by numerous writers; and all surgeons of considerable experience in this matter have repeatedly seen it, and sometimes also constipation, disappear promptly after removing such an appendix, which in other instances also masquerades as gall-stones or gall-bladder disease, bilious attacks, ulcer of stomach and duodenum, renal and ureteral colic, etc. B. G. A. Moynihan[4] of Leeds, England, says one form of chronic appendix produces symptoms resembling those of ulcer of the stomach, but with more caprice. Gastric ulcer symptoms come in some order; not so with appendix dyspepsia. There is no regular period of absence of pain after meals as in ulcer. Not better in warm weather as in ulcer. Is more frequently made worse by exertion than ulcer is; causes more vomiting after meals and for a variable time than occurs after ulcer; says he has seen blood in considerable amounts vomited in a dozen of such cases of stomachs functionally disturbed by a chronic appendix, three pints in one of them. They are the cases of pyloric spasm, he says, that may be observed contracting in such cases when the abdomen is open and before the parts have been handled, while the essential organic characteristics of ulcer of stomach and duodenum are absent. He says vomiting after meals is the most constant of all symptoms of appendix dyspepsia.

By Graham and Guthrie[5] the chronic appendix is regarded as coordinate with gall-bladder or stone disease and ulcer of the stomach or duodenum in producing epigastric and other abdominal symptoms; and they present good differential diagnostic clinical pictures of this triumvirate in abdominal pathology. They say the average age of gall-bladder patients is 40 years; of ulcer patients 45; and of appendix patients 34 years. Again, on the side of pathologic anatomy on this subject: McCarthy and McGrath[6] have found that the lumen of the appendix was partially or completely obliterated (sign of preceding inflammatory process in it) in 17 per cent. of 2,549 cases of general autopsy; in 17 per cent. of seventeen cases of pyloric spasm; in 23.5 per cent. of 1,005 cases of appendicitis; in 26.9 per cent. of fifty-two cases of gastric and duodenal ulcers; in 44.8 per cent. of 118 cases of cholelithiasis; and in 52 per cent. of fifty-seven cases of cholecystitis. Thus showing that during operation for gall-bladder and stomach disorders of this kind examination of the appendix finds this positive evidence of disease in it, more frequently present than it is found in general autopsies and operations for appendicitis itself.

During the last ten years it has been found that a small nodular enlargement usually at or near the tip of the appendix is found in about 0.5 per cent. in all appendices removed for appendicitis or otherwise. These little tumors are usually discovered afterward only by careful examination with the microscope and are found to be composed usually of spheroidal cells by some likened to "basal-cell" carcinoma of the skin or rodent ulcer which is known to be of slow growth and usually devoid

4. Brit. Med. Jour., Jan. 29, 1910.
5. Jour. A. M. A., March 9, 1910.
6. Ann. Surg., December, 1910.

of metastases. These growths begin in or near the submucosa and invade the other structures in the wall of the appendix and mechanically occlude its lumen in such a manner that pathologists usually class them as carcinoma. This was, however, left somewhat in doubt and indefinite in the discussion on this subject at the last meeting of the German Pathological Society,[7] because these tumors occur in early life, mostly between 10 and 40 years, do not form metastases, and do not recur after removal usually. Some explain this by the fact that they are removed so early, because they soon cause a perforation of the appendix, as Kelly[8] says, or cause appendicitis otherwise and induce a timely extirpation.

In 1908 McWilliams[9] collected 105 cases of this kind and McCarty[10] during the past year reported twenty-two as found among 5,000 appendices removed in one institution.

The appendix is too tricky and treacherous to be trusted when it appears normal. In two nurses that were operated on by me for growing invalidism due to retroversion, I had to do an emergency operation afterwards for violent appendicitis. In neither of them had there ever been the slightest suspicion of an unhealthy appendix, nor was there any at the time of first operation. In the first one, therefore, I did my then preferred bi-inguinal celiotomy and did not see the appendix. I could, however, as well have done a median section and transplantation of round ligaments into the abdominal wall and removed the appendix, as I have done chiefly since then. In eighteen months afterward I had to do a much more serious operation for a much graver indication, all of which I could have avoided as well as not. In the other case I did the median section, examined the appendix carefully. It was normal in the best of my judgment, and I dropped it for purely sentimental reasons, and eight months later I had to do an emergency operation for violent appendicitis in this case also. While both patients recovered and are well, still I could and should have saved them their severer second sickness and much more dangerous second operation, by a harmless additional act at the time of their first operation. On the other hand, an appendix that has given rise to most serious trouble may become very innocent in appearance again. A farmer had appendicitis that was recognized by his physician, but treated medically. A large lumbar abscess formed that was opened by the doctor; but it would not stop discharging. With such a fistula leading toward the right kidney, he came to me. I opened up the tract and explored the abscess cavity, in which I found a fecal stone lying near the kidney. Then, to complete the work, I cut for the appendix, and was surprised to find it appearing perfectly healthy, aside from a few adhesions.

L. C. Fischer[11] had to do appendectomy after another abdominal operation in two cases likewise; and on inquiring of a number of operators, found that E. C. Davis, George H. Noble, Joseph Price, H. A. Kelly and J. B. Murphy had a similar experience. Howard Kelly also found six

7. Verhandlungen der Deutsch. Path. Gesellschaft, 1910, xiv, S. 167.
8. Kelly and Hurdon.
9. Am. Jour. Med. Sc., 1908, cxxxv, 822.
10. Jour. A. M. A., Aug. 6, 1910, p. 488.
11. Atlanta Journal-Record of Med., November, 1908.

such cases in the literature and does well to call attention to the fact that the normal appendix had better be removed when it can reach to the area of operation, because it is liable then to become adherent and dangerously constricted. Fowler[12] had two such cases of appendicitis after operations for pyosalpinx and says: "Ever since the occurrence of these two cases, I have made it a rule to perform typical excision of the appendix when the latter is intraperitoneally situated, in every case in which the abdomen is opened for any operative structures within the reach of this mischievous and useless organ."

Weiswange[13] did a laparotomy for pyosalpinx. The appendix was normal and could well have been removed. A few days later temperature and local signs developed as if an infection had occurred. An exudate was drained into the vagina; but a persistent discharge followed from the lower end of the abdominal incision, in spite of several exploratory efforts from various directions. Finally another laparotomy was required, when the end of the appendix was found drawn over to the original wound, as cause of the trouble. Weiswange holds that the appendix should be removed in all gynecologic laparotomies if possible. He says we cannot tell macroscopically certainly by feeling whether the appendix is normal; and we are often deceived. Kroenig and Pankow also take this stand, he says, although it may mean the removal of 40 per cent. of healthy appendices.

Savarioud[14] of Paris says: "My conclusions after due study of appendicitis are that it is much better to prevent an attack than to attempt a cure. Awaiting the day when it shall be the proper thing to remove the appendix from everyone, so as to do away with the disease altogether, I would advocate at present that when the appendix yields the slightest suspicion of being affected, its removal should be enforced." To those who are so sure of their ability to diagnose a healthy appendix the following cited by Novicki is a good lesson: A man of 38 years, suspected of having his first attack of appendicitis, was operated on for this in the Lemberg hospital. The appendix was found normal; and the abdomen was closed. The patient continued in a septic course and died. Autopsy showed the same normal (?) appendix and a retrocecal abscess that communicated by fistulæ with both the cecum and the same normal (?) appendix.

Concerning prophylactic removal of the appendix, McWilliams[15] in an excellent paper on all appendectomies performed in the Presbyterian Hospital of New York in the years 1906, 7, 8 and 9, amounting to 1,411, says that 212 of them were done incidentally during laparotomies made for other reasons, and several with other than abdominal operations. Of these 212 cases, one died of ulcerative colitis, in which a cecostomy was done in addition to removal of the appendix, which had nothing to do with the death. He says: "I have seen no list of such operations to prove that the removal of the appendix will prejudice recovery." In my own

12. Kelly and Hurdon.
13. Prager med. Wchnschr., Jan. 21, 1909.
14. Interstate Med. Jour., May, 1900.
15. New York State Jour. Med., March, 1910.

work I have removed the appendix in 299 cases of the last 600 abdominal sections that I have done for other causes than appendicitis or the removal of the appendix. While several of the former number have died, I am satisfied that this would have been the same if the appendices had not been removed. Le G. Gurry[16] had a mortality rate of only 0.3 per cent. in 545 chronic and early acute cases of appendectomy. It cannot be claimed that the danger from the incidental prophylactic removal of the normal or quiescent appendix can be any greater. In 200 of the 299 cases, the appendix showed clear signs of abnormality. These were in the order of their frequency: (a) club-shaped, being constricted at their origin or near the middle with a peripheral enlargement; (b) too long, measuring from 8 to 15 cm. (Nowicki states from extensive and exact observation that the average length in middle life is 7.4 cm.); (c) bound down and compressed in parts by bands of adhesions; (d) fecal stones or other foreign bodies like bristles, and in one instance bird-shot; (e) worms, twice.

I have repeatedly seen dyspepsia, and several times a strong suspicion of gall-bladder or duct disorder disappear after removal of a chronic appendix. Recently a man was sent to this city to consult an internist for supposed ulcer of the stomach. He also had a constant tenderness with sometimes a positive pain, at a point one inch inward from the left anterior superior iliac spine. No pain had been noticed in the region of the appendix, but there was positive tenderness of this member which seemed palpable to the finger. Palpation and percussion gave no positive signs of disorder in the upper part of the abdomen, aside from a little diffuse tenderness. I removed his appendix which was long, club-shaped and had bands of adhesions passing across it. The wound was extended upward and the gall-bladder, pylorus and duodenum were carefully inspected and the common duct palpated. All were negative aside from a little general hyperemia. His convalescence was smooth; and his dyspeptic symptoms and the suspicious left side pain have never appeared again. He is in very good general health.

Nearly ten years ago Howard A. Kelly put the question to a larger number of operators: whether they would remove the normal or quiescent appendix when it is practically possible during an abdominal operation done for other reasons. He received forty-four replies in the negative and twenty-six in the affirmative. To the question whether they would remove it if there were adhesions on it he received sixty-seven affirmative and seven negative answers. At that time the evils now known to be caused by the "chronic" appendix were not known. With a knowledge of these such a vote would now, no doubt, result in a large majority in the affirmative.

Appendicostomy.—At first thought this little tube would seem to be a very convenient means for establishing a small aperture into the cecum. But there are anatomic difficulties in the way: (1) its origin is an inch or more farther away from the abdominal wall than the presenting part of the cecum; (2) its most frequent direction, as studied by a number of

16. Jour. A. M. A., Jan. 1, 1910.

observers and on a large number of bodies, is transversely inward, rather away from the abdominal wall; (3) it is held in its position by a more or less firm mesentery which conveys its nutrient vessels; and it is often difficult to reverse its course therefor, by stretching or cutting at least parts of its mesentery without interfering too much with its blood supply.

The appendix has therefore frequently become gangrenous; and a cecostomy has resulted with not so firm a union between the cecal and abdominal walls, nor so good a chance for closing it when no longer needed, as would have been the case if a cecostomy had been done in the first instance, for instance by a technic resembling the gastrostomy of Kader. The following from C. A. L. Reed[17] is to the point: "I wish in conclusion to urge that cecostomy rather than appendicostomy should always be adopted as the operation of choice. As compared with the presenting part of the cecum, the ceco-appendiceal junction is an inch or more farther away from the abdominal wall. The meso-cecum is furthermore ordinarily so short and is always so inelastic that the appendix cannot be drawn and held forward without a degree of tension that is fatal to its integrity. The distensive pressure of any tube inserted and retained in the narrow lumen of the appendix is another influence that causes it always to perish during the first few days after the operation. Thus an appendicostomy always, sooner or later, resolves itself into a cecostomy. It is better, however, to do a cecostomy as a selective operation." W. B. Webb[18] did appendicostomy thirty-one times. He prefers it to cecostomy. However, in forty-three autopsies carefully observed with reference to this point, he found the appendix not available for appendicostomy in fourteen of them.

While, therefore, the uses for a temporary fistulous communication with the cavity of the cecum have increased greatly in kind and number, this expedient can be had without as well as with the appendix as a means. Its value for any such extremely rare and uncertain use is therefore infinitesimal, and cannot be considered by a physician or surgeon who is properly aware of the scientific facts and characteristics of this vestigial appendage and who conscientiously does his duty, to the best of his ability, to his patients.

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DISCUSSION

Franklin H. Martin: Dr. Goldspohn did not make the point as definitely clear as I hoped he would that in all cases, or in the great majority of cases of operation upon the abdomen for incidental diseases he would remove the appendix if not diseased. For a long time, of course, we could excuse him for not doing that because he did so much work through the inguinal canal, and it is subject for congratulation that he has seen the light and has moved away from that kind of procedure.

In reading the abstract of Doctor Goldspohn's paper I concluded that he recommended the removal of the appendix in nearly all cases where it can be reached, and I have based my discussion on that idea of his position.

I think there can be no question about the soundness of the position taken by the essayist in his paper if the recommendations are to be carried out by experienced surgeons.

17. Jour. A. M. A., May 22, 1906.
18. The Postgraduate, August, 1910.

We all know and recognize the deplorable fact that there are men attempting to do abdominal surgery who are not competent to take out a normal appendix, when they go after it deliberately, to say nothing of the inadvisability of going after a normal or a diseased one through an incision made for another purpose.

This is not in criticism of young surgeons, who, naturally, cannot become experienced surgeons, until they have done much surgery, but, it is in criticism of the man who never can become a safe surgeon no matter how long he may attempt it. It is erroneous to assert that every well equipped medical man can become a surgeon if he tries a long time. A surgical temperament is a desideratum and a surgical temperament is as definite an entity as one can conceive of.

When the educational fight is all over, and medical schools are conducted exclusively for the education of medical men, a way will be found, I trust, that will eliminate medical men from the surgical ranks who can never become surgeons, and to impart experience to educated young surgeons without our patients having to suffer the consequences of that experience.

In this presence, therefore, I trust and assume my preliminary remarks are irrelevant, and the paper stands for sound doctrine, and what I have to say and recommend will be said as a recommendation to competent abdominal surgeons.

The most hopeful thing about this whole paper is the pre-supposition that an incision is going to be made somewhere that is large enough to allow an examination of all appendices, and this, again, presupposes that every palpably diseased appendix will be discovered. There is nothing more preposterous to me than to see a surgeon attempting to do work through an inch and a half incision in order to save traumatism and time, when if traumatism does then occur, it will be to buried tissues handled blindly through an inadequate incision, and where time is needlessly consumed in attempting to do work in the dark.

The next in degree of preposterousness, is to see a man work through a small incision, and through his inability to explore the balance of the abdomen, leave an undiscovered appendicitis or some other pathology that would have been discoverable and easily repaired through a proper incision.

A better way to save time, than by a short incision, is to reserve the anesthetic entirely for the operation. The patient should be placed upon the table in the operating room and the fifteen minutes of final preparation done before the anesthetic is begun. All the time the patient is asleep should be utilized in the operation. This will give that much more time needed for exploration, and if necessary, the removal of the appendix, or the drainage of the gall-bladder.

If we are going to recommend the removal of all appendices when the abdomen is open, we must pre-suppose an appendectomy technic that presents the minimum risk. This is no place for experimentation or fancy work.

Insure perfect hemostasis by ligating both appendix and meso-appendix with fine strong catgut. Insure perfect burying of the stump with a purse string of linen, or silk, and whip in all uncovered surfaces with the same ligature.

Before burying the severed stump of the appendix, render sterile its septic point by the application of a reliable and safe antiseptic. This point may be superfluous in most cases, but sepsis will only occur where there is septic material.

Nor must we feel that it is a criticism of a surgeon's diagnostic ability if he takes time, to be sure, when the abdomen is open to ascertain that difficulties do or do not exist that he did not suspect. In fact an abdominal surgeon has no right not to suspect. The greatest surgeons in the world, both in technic and in diagnostic opportunities, never allow themselves to be deceived by a diagnostic guess. They make sure, by large incisions, and through exploration. In this way they have found things the rest of us have never dreamed of—until afterwards.

It is interesting to remember that the relative proportion of appendicitis in men and women in 100 cases is forty women and sixty men.

Men are more susceptible because subjected to harder work, and inclined to eat more abundantly, and of coarser food. Their pelves are narrower; the cecum

occupies a more central position, over-riding the large constantly acting psoas muscle.

In women the reverse is true, in regard to excessive exercise, and overeating, and the cecum with the appendix occupies a roomy cavity, and further removed from the center of the body so that it is not subject to the same degree, to the traumatism of the psoas muscle.

A large percentage of appendicitis in women occur:

1. As a result of infection secondary to the pelvis (a comparatively small percentage).

2. In the so-called neurotic type with movable kidneys.

3. In women with broad shoulders and male pelves, who are athletically inclined.

The practice that I recommend and adopt (with exceptions) is as follows:

I explore, in chronic cases, all vulnerable points of the abdomen when it is open. This is accomplished through a three-inch incision:

1. Through the right rectus muscle one-half to an inch to the right of the median line between the umbilicus and the pubis, when the diagnosis indicates pelvic trouble.

2. A three-inch right rectus incision over the seat of the gall-bladder or the stomach when gall-bladder or stomach difficulty is diagnosed.

3. A right rectus incision three inches in length near the outer border of the right rectus at McBurney's point for suspected appendicitis.

From any of these incisions all the vulnerable points of the abdomen can be rapidly explored by the insertion of the hand, and the incision extended if necessary.

Through the upper or lower incisions I consider it advisable to remove the appendix in the majority of males under 60 years of age whether diseased or otherwise, and to remove the appendix whether diseased or not in all females under the same age when the disease is suspected (and I have often done it anyway) or where the individual is of the athletic or of the movable kidney type.

I wish to emphasize, what the essayist has emphasized, and to forestall just criticism of the opponents of this line of work by stating that these rules should not be applied if the immediate condition presenting, after making the incision, reveals a pathology the handling of which, successfully, will require conservation of all possible time, and the slightest excess of traumatism; or if the general or any special condition of the patient contra-indicates the slight delay necessary for additional exploration; or where it is necessary to explore from or through an infected field.

In these cases, I should consider it as criminal to explore, as it is criminal not to explore when the abdomen is open, where these definite contra-indications do not exist.

Channing W. Barrett: I wish to express my pleasure at hearing this paper of Dr. Goldspohn's. I wished to see whether there was very much difference in Dr. Goldspohn's handling of these cases and mine, and I see there is not, because he has shown a conservatism which I did not expect from the title of the paper.

I would take issue with the title of the paper, and with the abstract upon this point: not perhaps with Dr. Goldspohn personally as he handles his cases.

A very large part of his paper was taken up in showing what a criminal the appendix is. Upon that I do not believe we would have a dissenting voice. The appendix is, without doubt, one of the great criminals of the abdomen. The sigmoid is another point of the intestinal tract combining very largely in abdominal disease. In fact, I think we find the sigmoid more frequently involved with pelvic disease than the appendix and we might well spend time telling what a criminal it is.

One might as well say, what shall we do with men in general, and then what shall we do with him when he becomes a criminal, or what shall we do with a murderer when we have a jury impaneled. Now the question is not at all what we shall do with man, from a criminal standpoint, or what shall we do with the

murderer when we have a jury impaneled, but what shall we do with the murderer? The question is not what shall we do with the appendix when we are in the abdomen, but what shall we do with the appendix. Surgeons have been busy for years telling what they will do with diseased appendices; now we have established before us the fact that the appendix is so great a criminal that it must be dealt with even before it becomes diseased. It is not a question at all of what we shall do with the appendix when it is diseased, or when we are in the abdomen and it is only a matter of a few minutes' work to remove it, but *what shall we do with the appendix?* If it is true that because the appendix is apt to become so diseased and we cannot tell when looking at it that it is diseased, how can we tell how the appendix appears in the husband of the woman upon whom we are operating. If she should have a healthy appendix removed (which we know is healthy because we can see it right before us) should not he have his removed which we cannot see and which, for all we can tell, is diseased? It is easy enough to get at the appendix, it is just a little way in and it can be done perfectly safely, while if we add this operation to the woman some one or two or more women are going to die because of the extra shock. We can easier tell whether a given appendix is diseased or not than we can tell whether a woman has received the limit of her operable possibilities. You may not be able to tell until she is put back to bed and probably died.

So I repeat, the question is: what shall we do with the appendix on its own account, not because we are doing something else and can add this.

Fenton B. Turck: I want to call attention once more to a point of etiology made before. Surgeons do not look to etiology or to the question of the disease behind the mechanical conditions presented. Fever in the appendix may be due to infection, especially to the increased virulency of the bacillus coli. Mahnert and Patterson's observations show that ulcer of the stomach follows or is associated with appendicitis. Since the colon is evidently as great a "sinner" as the appendix, might we not with just as much reason assume that with every abdominal incision we should remove the colon? It is a simple matter of tests to determine the virulence of the bacillus coli, and even the degree of virulence. Intraperitoneal injections of bacillus coli cultures will kill a rat in so many hours, which represents the pathology in the case. Having determined the fact of increased virulency, our attention must be directed against it. That is as much a surgical proceeding as the removal of some three hundred appendices in which there was no involvement. When we have at our command methods by which we can determine, and absolutely prove, the increased virulency of the colon bacillus, which causes most of the conditions for which we operate in the abdomen, it is time we used prophylaxis against the cause rather than remove normal organs that might or might not be involved.

A. Goldspohn (closing discussion): In reply to Dr. Martin I would say that it would not be rational to advocate the removal of appendices in every operation of the abdomen. This removal is warranted only provided it can be done without added danger. That is not always possible because many patients are so dilapidated, or the work we have to do is so serious that it taxes their endurance to the uttermost.

Also, it is not necessary to remove the appendix from old people. It is an organ which grows with childhood and maturity and then grows back again in senility. Very, very few cases of appendicitis will be found in people over 50. Therefore when you operate on any cases for carcinoma it is not often indicated to remove the appendix because you are dealing with an elderly subject and with bad cases, nothing of the kind is called for.

Then there are other instances where the appendix is walled in, you would have to do so much foolish digging and so much injury to the patient to find it, which certainly you would scarcely do unless you had very, very good reason for its removal; therefore, I find only about half of my cases which I considered proper subjects.

In reply to Dr. Barrett: I cannot see so very much sense in his remarks. He might as well say that where it is good to take two doses of a medicine it would be better to take twenty or two hundred.

Replying to Dr. Turck I would say that we do not advocate removal of the colon because it is an organ having a distinct function. The appendix is not an organ and has no function. The colon is accessible to Dr. Turck. The appendix is not.

So far as inversion of the appendix is concerned: I did that in about the first fifty cases, but now I rather prefer to remove it entirely.

ARE REFORMS NECESSARY IN THE A. M. A. AND ITS CONSTITUENT BODIES?

WITH SUGGESTIONS FOR REFORM IN THE POLITICS AND MANAGEMENT OF THE ASSOCIATION *

G. FRANK LYDSTON, M.D.
CHICAGO

That physicians in general are poorly versed in matters of law, goes without the saying. That the organization and operations of our medical societies are often open to impeachment on legal grounds is merely a corollary of indifference to and ignorance of legal forms on the part of the medical profession at large.

The saving grace in the case of medical organizations is the fact that they are usually voluntary associations for purposes of a purely social and scientific character, and the occasion is extremely rare when non-conformity to technical legal requirements is in the slightest degree important. When, however, a medical organization becomes a commercial enterprise and acquires large business interests and property, the question of conformity to law is of vital importance. It is especially important if non-conformity to law involves an infringement of the rights of the membership at large and serves to antagonize the principles of democracy or to place the management and control of the organization in the hands of a self-limited few.

In the days when the American Medical Association was merely a voluntary organization devoted to science and professional fraternalism and good fellowship, it made very little difference whether or not legal technicalities were observed in its organization and management. Since, however, the Association entered the commercial arena, the situation has radically changed.

I doubt not that, had some of the gentlemen who so enthusiastically embraced the ambitious scheme of reorganization some ten years ago been able to foresee the time when the Association would have a large trust fund, a business of over half a million dollars a year—a business that is still growing and which, when the Association has finally monopolized the entire field of medical journalism, medical advertising and medical publishing, will be awesome to contemplate—they doubtless would have proceeded with caution and due observance of all legal methods and

* Read at a meeting of the Chicago Medical Society, Feb. 15, 1911.

formalities which would protect the Association and its members from future complications. However, not only did they not proceed with due regard for legal form, but even the adoption of the ambitious and portentous scheme of reorganization of the A. M. A. was itself accomplished in a most irregular manner and with utter disregard of the organic law of the Association. What occurred at that time was an example of what always occurs when the indifference of the mass makes it as clay in the hands of the ambitious few. When ambition comes in at the political door, principle and the rights of the rank and file fly out of the window.

And not all were blind. As one distinguished member of the House of Delegates expressed it, "We have put a yoke about our necks, and a ball and chain on our legs from which we never will be freed." As to the yoke and leg shackles, they are self-evident; as to the hopelessness of the situation, I am not so sure.

I present herewith a statement bearing on this point from a gentleman who was present during the proceedings by which at St. Paul in 1901 the reorganization was effected:

"Under the constitution existing in 1901, the constitution then gavelled through should have been referred to the next meeting for action. The minority report was suppressed by the physician who was given it to read before the Association. Although the ayes and noes were called for, the president ignored the call and ignored the protesters against the railroading, refusing to recognize any member of the minority in the executive session. I voted against the clauses, individually and collectively, pointing out *ex post facto* factors and the illegality of that, and of the summary action. The minority report which was suppressed by the man intrusted with it, embodied these ideas.

(Signed) "JAS. G. KIERNAN."

It will thus be seen that the officers of the A. M. A., from the very beginning of reorganization, ignored legal formalities and the rights of the membership at large.

Ignorance, or perhaps an excusable lack of appreciation of the ordinary principles of equity, might condone the irregularities which characterized the reorganization of the A. M. A. It would, however, be difficult to condone the manner in which the governing powers of the Association have since resented all criticism of its defects and irregularities, and smothered or condemned all suggestion for reform.

The legality of the operations of an organization revolves largely around its political methods. When these are illegal, or even unfair and unjust, the entire fabric of the organization is on unstable ground. I doubt if any organization in this country is on such precarious ground as is the A. M. A. Under present conditions the Association is absolutely undemocratic, and its operations open to most radical impeachment on the grounds of unfairness and illegality. The conditions surrounding the initial vote alone are sufficient to condemn the entire political system of the organization.

The only opportunity—an opportunity that is largely theoretic—granted the members of the A. M. A. for the expression of membership

opinion and rights is afforded by the constituent district societies. The members of these bodies are the initial voting units of the A. M. A. There are nearly 80,000 of these voting units, of which something less than 35,000 are members of the A. M. A. *In brief, the voting majority which elects the state delegates, who in turn elect the national delegates who transact the business and constitute—by the power they vest in the Board of Trustees—the governing body of the Association, is composed of non-members.* That this is not understood by the membership at large is not surprising in view of the fact that one of the trustees recently informed me that he did not know that such a condition existed! I was compelled to give him a diagram in order to enable him to comprehend the situation. Once he comprehended it, however, he was gracious enough to admit that the system was wrong. His graciousness, however, would be more in evidence and more to the point if, the local trustee and the editor permitting, he would acknowledge the truth in the columns of the *Journal*.

With the control of the Association in the hands of the men elected by a voting majority of non-members—who contribute not at all to the A. M. A. yet have the same elective franchise as that for which the regular members are mulcted in dues—no argument should be necessary to prove that the organization is at least technically illegal and indubitably unfair from top to bottom. The political stream cannot rise higher than its source. But there is something apparently still more serious:

The A. M. A. was incorporated under the laws of the State of Illinois. It rightfully enjoys no privileges other than those accorded all other corporate bodies of the state.

However their actions may belie their words, the ruling powers of the Association do not claim that the charter of the A. M. A. confers special rights and privileges. In answer to an inquiry which I addressed to the two gentlemen who for many years have held the destinies of the A. M. A. in the hollow of their hands, I received the following replies, which show a harmony of opinion, knowledge and literary expression that is truly remarkable:

CHICAGO, 4-30-10.

DR. G. F. LYDSTON, Chicago, Ill.

DEAR SIR: Replying to your letter of April 28: You ask "what special privileges are enjoyed by the A. M. A. under the Corporation Laws of the State of Illinois." I do not know that the American Medical Association enjoys any privileges other than those enjoyed by other similar organizations.

Very truly yours,

(Signed) GEORGE H. SIMMONS.

CHICAGO, May 25, 1910.

DR. G. F. LYDSTON, 100 State Street, Chicago, Ill.

MY DEAR DOCTOR: Your letter to the Secretary of the American Medical Association asking what special privileges are enjoyed by the A. M. A. under the corporation laws of the state of Illinois was referred to me as the chairman of the Board of Trustees and in the absence of the Secretary from the city. I do not know that the A. M. A. enjoys any "special privileges" over any other corporation organized under the same law and with the same kind of charter.

Yours Very Truly,

(Signed) M. L. HARRIS.

What are we to infer from the statements of Drs. Harris and Simmons? Are the secretary and the chairman of the Board of Trustees of the A. M. A. ignorant of the law in matters in which we are paying "eminent counsel" to advise them, or are they ignorant of the construction of our charter? If they know what appears to be the law, and are familiar with the charter—and the letters of both claim familiarity with it—they stand convicted of wilfully breaking the law and of making the entire membership of the Association *particeps criminis* in their infraction of the law and therefore *cannot evade the responsibility of whatever the outcome of court proceedings may be.* This would seem to be the inexorable logic of the situation.

I will say but little regarding the adoption of its charter at an "adjourned meeting" of the A. M. A. (*sic*) held in the Columbus Library, 103 State Street, Chicago, June 16, 1902, subsequent to the Saratoga meeting June 13, 1902, at which several thousand members were present, other than to state that every man present was aware of the architectural limitations of the Columbus Library and well knew that the proceeding was irregular and illegal. As one gentleman who was one of the alleged "quorum" (!) of the A. M. A. remarked to me the other day: "We knew the whole thing would not stand the test of legality, but we were all good fellows together and everything went."

But the irregularities of 1902 possibly may be of no moment now; they may serve merely to illustrate the slipshod and irregular manner in which certain steps of the present organization were accomplished. And yet, one never knows what the courts will decide in a matter of this kind.

The important point is this, viz.: the corporation laws of Illinois demand that the corporate business of all corporations chartered by the state shall be transacted, not only within the borders of the state, *but at the location of the central office of the given corporation as designated in its charter.* The charter of the A. M. A.—a copy of which lies before me—plainly states that the central office of the Association is in Chicago, Cook County, Illinois, *notwithstanding which its elections are held here, there, and everywhere.* As there has been, since the reorganization, only one election held in Chicago, that held three years ago, there can have been but one legal election since the reorganization. Even this is dubious, because of the illegal construction of the official body at that time.

In answer to my statement that the elections of the A. M. A. were illegal, the ILLINOIS MEDICAL JOURNAL said editorially, some time since: *"Eminent legal counsel have passed upon this point, and their opinion is better than Dr. Lydston's."* The editorial neglected to state who the "eminent counsel" were, or what their opinion really was. I inferred, however, that the editor intended to convey the impression that the "eminent counsel" had opined that the elections were "legal." One would think that the editor might have taken the membership into his confidence and stated the facts.

I will not dwell at length on the fallibility—to use a mild word—of the opinions and advice of corporation lawyers in general, when retained by the particular corporation whose acts legal advice and opinion are pur-

chased to sustain. I will merely state that, as is well known, they are prone to give the sort of opinion and advice which most nearly suits the policies of their clients. They are willing to skate on pretty thin ice if they think there is a long chance of not breaking through.

I suspect that the "eminent counsel" in this instance were no exception to the rule as to advice in the matter of evading legal issues and cutting legal corners. I fancy that the opinion was, that while the elections of the A. M. A. were illegal, the Association was safe because all the members were "good fellows" and nobody was likely to protest. The "eminent counsel" probably further advised the officers of the Association to "assume a virtue though they had it not," by having the trustees meet in Chicago and "ratify" the proceedings of such meetings of the House of Delegates as should happen to be held outside the state of Illinois. The question naturally arises: *If the "eminent counsel" and the officers of the A. M. A. did not know that the legality of meetings of the A. M A. outside the state of its incorporation was open to question, why the farcical "ratification" meeting of the trustees?* It might also be pertinent to inquire why, if no legal complications were feared, an application was made to congress for a national charter for the A. M. A.

Whatever the psychology of the situation may have been, the following presents existing conditions in a nutshell:

The Board of Trustees, an illegally created body, meets annually in Chicago for the purpose of "ratifying" and making "legal" the transactions of the illegally constituted body which illegally created it. A futile attempt this, to make the political stream rise higher than its source, which puts to the blush squaring the circle, the fourth dimension, or any other of the seven follies of science. One might reasonably wonder what the advice of the "eminent counsel" would have been, had they foreseen the present immense business of the A. M. A. or, above all, had they foreseen the appearance of insurgents in the land.

As to "ratification" making legal the acts done at meetings of corporations held outside the state of organization, be it noted that such ratification can only be made by a two-thirds vote of the identical body holding the particular meeting the acts of which are sought to be ratified—(*Vide* Sec. 20, Chap. 32, Illinois Statutes)—and plainly, the ratification of the acts of A, the House of Delegates, by the act of B, the officers elected by A, is abhorrent to the law. *"Nemo potest esse simul actor et judex"* (*Vide* Broom's legal maxims). In brief, while a corporate body may by a two-thirds majority, ratify and make valid its own acts, where such are illegal in form, no body of its creation can legally ratify the acts of the original body.

The trustees and the "quorum" (sic) which ratified the acts of the Saratoga meeting and adopted the present charter will please take notice.

Having ventured to express an opinion regarding the legality of the elections of the A. M. A., and having filed a formal protest against further violations of the law, as I did prior to the last meeting at St. Louis; and further, having been refused the consideration to which my membership in the organization entitled me, I naturally was curious to have the

point settled in the only forum that appeared to be open to members of the A. M. A., viz., the courts. I shall be well satisfied with the decision of the court, whatever the ruling may be. Whether or not it supports my contention is not in point. *What I want to know, and as a member have a right to know, and what every member ought to know, is the precise legal status of the A. M. A. and its individual members.* The Association has rapidly become wealthy, and is growing wealthier still—for our ambition knows no bounds—and if there is a shadow of suspicion of illegality which may one day cast a cloud on the title of our vast possessions and enormous business interests, the sooner we know where we stand the better. *If we have builded a house of cards, it would better fall now, before any more stories are added.* Better another and sound reorganization, than one which will not stand the test of legality. That some people's pride might be hurt is true; that some people might fall with the house on the sands is also true, but the pride and ambition of men are as nothing in the crucible in which principles are tried. The selfish interests of the ambitious few should weigh little in the balance with democracy and the weal of the membership at large. Men may come and men may go, but let us hope that the A. M. A., like Tennyson's brook, will go on forever.

As to resorting to the courts, the issue was forced. All criticism, all protests, all suggestions had been resented or smothered. We "dissenters" were willing to meet A. M. A. officialdom half way, but the ruling powers held that no good could come out of Nazareth, and there you are. There was no plane on which the gentlemen who were so sure of their own infallibility would consent to meet the "insurgents." There was no medium through which to present and discuss the issues involved. At no time or place had it been possible to secure an audience with the powers that be or a forum in which to openly debate the issues involved. Was this because the A. M. A. officialdom believed itself right, and the dissenters wrong at all points? Publicly, yes, but in secret caucuses, no. The gentlemen know they are wrong in the main, but refuse to admit the validity of a single criticism.

If I am wrong as to this assumption, if the gentlemen of the opposition are sincere in their belief that there is nothing rotten in Denmark, I would suggest that they debate the issue with the insurgents in the columns of the *Journal A. M. A.* The editor can be relied on to eliminate all acrimony and those "personalities" which have so keenly wounded the sensibilities of certain gentlemen who have yet to explain why the truth should not be spoken in medical politics as well as in the everyday variety. It would seem a difficult task to dress truth in a garb acceptable to some individuals, but if properly advised and instructed, the editor possibly might refrain from using the blue pencil too freely on the matter personally unacceptable to him.

Of one thing the members of the A. M. A. may be assured, viz., protest against present conditions will never cease until an open and free discussion of the various issues followed by the necessary reforms has occurred. *Smothering of the grumbles of discontent, partisanly sidetracking issues, stand-pattism and "double crossing" will not avail.* As

to the legal points involved the members may console themselves that, when I have done, the controversy will be settled once and for all. If needs must, the matter will be carried to the court of final jurisdiction. Partisanly influenced public officers who refuse to do their obvious duty will probably not avail the opposition in the attempt to prevent a hearing in a matter in which *the gentlemen of the opposition should themselves be first to demand a decision.* Some people appear to be poor psychologists when they estimate the metal and endurance of an opponent.

As to the status of the state's attorney in refusing to serve *quo warranto* writs on the trustees of the A. M. A., the following is pertinent:

In the case of People *ex rel,* Edwin O. Rastee, *vs.* John J. Healy, states attorney, it appears that Horace L. Brand was claiming to be treasurer of the Illinois Publishing Company, a private corporation under the laws of Illinois. A petition of *quo warranto* was presented to said Healy, state's attorney, setting forth the facts, to-wit: that Horace L. Brand had never been legally elected secretary of said corporation. The state's attorney and the attorney general both refused to sign said petition of information in the nature of a *quo warranto,* to inquire into the title of said Brand, and thereupon Edwin O. Raster filed a petition for mandamus to compel said Healy to act and to sign said *quo warranto,* and the supreme court held that the relator was entitled to his remedy and issued a mandamus directing said state's attorney to sign said information in the nature of a writ of *quo warranto.*

The power must be considerable which could so influence a public official as to impel him to refuse to fulfil the obvious duties of his office. I submit that it is not only considerable, but dangerous to professional liberty and subversive of the rights of individual members of the A. M. A. and its constituent bodies.

Certain gentlemen in A. M. A. officialism have presumed to withhold from the consideration of the membership all criticism of, and protests against what I believe to be radical faults in the organization and administration of A. M. A. affairs. They have both discreetly and indiscreetly assured the members that my position was unworthy of attention. Be it again remarked that, to get the matter properly before the Association, I filed a formal protest against the holding of an election in St. Louis, on the ground of its illegality. *This was not presented to the House of Delegates nor published in the Journal. Should the members of the House of Delegates take exception to my resort to the courts, they will please note the foregoing and place the responsibility where it properly belongs.* The House might also inquire why the resolutions passed by the Louisiana State Society recommending to the A. M. A. the referendum, published in various journals and formally transmitted to the secretary of the A. M. A. was *neither published in the Journal of the A. M. A. nor presented to the House of Delegates. Who suppressed it, by what authority and for what purpose?*

That the protest, and the legal proceedings I afterward began were not based on chimerical or captious notions, I will now proceed to show by all the authorities I have been able to gather. I submit merely those

facts which impelled me to lay the matter before my attorneys and which I submitted to them, and some which my counsel have since added. As to what further may be gathered by my attorneys is a matter of future development. One might aptly inquire on what the "eminent counsel" to whom the Association pays our good money, based its opposition and advice to the officers of the A. M. A. on the point at issue and also on what the claim of legal "eminence" is founded. Possibly "legal eminence" is but an euphemism for legal cleverness.

1. As to the general issue, the following is brief and to the point:

In Reichwald v. Commercial Hotel Co., 106 Ill., 439-450, the Supreme Court held that: "With reference to the power of a corporation to perform corporate acts outside of the state of its creation, where the laws of its corporate existence have no force, the general rule is that such power does not exist."

This precedent has not yet been overruled, so far as I know, by any court. Be it remarked that, in regard to this point, which I believe is one of purely constitutional law, *no distinction is made between corporations for profit and those not for profit.* If the fact that the A. M. A. was organized "not for profit" is made an alleged defense, let us hope that our half million dollar growing business, and prospective publishing and advertising monopoly, will appeal merely to the court's sense of humor. This may save our faces and protect us from unpleasant complications, should the attorney general of the state obtrusively note the point. Our charter plainly states: *"The object is to promote the science and art of medicine."* There be those who feel that we are on rather ticklish ground in view of our vast business interests and attempts to corner the printing and medical publication market.

In several other cases the ruling has been equally explicit:

"It has been recognized as the general rule by this Court (Supreme Court of Illinois, Springfield) that the power of a corporation to perform corporate acts outside the state of its creation and where a corporate existence has no force, does not exist."

Harding v. American Glucose Co., 188 Ill., 555-641-615.
Bastian v. Modern Woodmen, 166 Ill., 595.

The court further said that:

"In some cases it has been held that action by the corporation outside the State of its creation is null and void." In regard to this point the law is that "such proceedings are voidable at the election of dissenting members of the corporation." (Morawetz on Private Corp., Sec. 488; Cook on Stock and Stockholders, Sec. 589.) (It will be noted that there are dissenting members of the A. M. A. corporation) and that, "of course, members or stockholders may be estopped by their consent to, participation in or ratification of the act done." (Hadley v. Stutz, 139 U. S., 417.)

A formal protest against the last election in St. Louis was filed by me.

Now as to the possible plea that the A. M. A. is a benevolent organization—this goes even further than the "not for profit" plea of the charter.

In Bastian v. Modern Woodmen (166 Ill., 600-601) and in Place v. People, (192 Ill., 160) the court held that: "There was no authority, at the time the head camp met at Omaha, to perform in the State of Nebraska corporate acts, strictly so-called, against the will of members of the corporation, and such an act as changing the articles of the association which formed the basis of the corporation, is unquestionably of that character."

Be it remarked that the election of officers for the transaction of business and the administration of a corporation is the most important of all corporate acts. The question of the legality of their subsequent acts is a matter of relative importance. The official body is the fountain head of all corporate acts and, if it be illegally created, everything that follows can be construed and usually proven to be illegal.

The court further said:

"The incorporators were required to state in their application the place where the principal business office should be located, and a copy of this application was to be made a part of the certificate of organization which was to be recorded in the office of the Recorder of Deeds of the county in which such office was located. The location was an essential and material part of the articles."

The membership will again please note that the charter of the A. M. A. reads: *"The location is in the City of Chicago, in the County of Cook, State of Illinois."*

In a certain Illinois decision it was, I believe, ruled that the trustees of a certain sanitary district could not legally transact business outside of their own district, even though all the districts were under the same general order of things and incorporated for the same specific objects. Be it remarked that the sanitary district bodies can hardly be alleged to be corporations for profit.

It has been repeatedly decided by the Supreme Court of Illinois that city councils, drainage commissioners, and other such chartered legislative bodies, cannot exercise their prerogatives outside of the territorial limits of the district within which their powers are confined. People *v.* Camp, 143 Ill., 154; People *v.* Hepler, 140 Ill., 199. In many other instances the courts of this state have repeatedly decided this question in a similar way.

Should the outcome of the legal proceedings which I have instituted be embarrassing to the officers of the A. M. A., they will have only themselves to blame. I have repeatedly demanded a hearing on the question at issue—and on many other questions involved in the reform movement in the A. M. A. The answer has been only impugnment of my motives and question of my sincerity and intelligence. The attitude of those in authority and their satellites has been, in effect, complete abrogation of the right of a member of the A. M. A. to in any way question the infallibility of the present official régime, or to openly protest against what many of the membership conscientiously believe to be wrong in principle and eventually disastrous in operation.

If, the defendants having admitted the facts of my allegation and demurred to my application for a mandamus on the ground that I have no standing at law in the matter set forth in the bill, the demurrer should be sustained by the court, the Association should, and probably eventually will, disintegrate from sheer lack of cohesiveness of its ultimate elements, the membership. The members, as it appears, have no rights within the Association, and if the court decides that they have no rights which the courts are bound to respect, they would better cease supporting such an anomaly and anachronism as the A. M. A. which, under such a ruling,

obviously would be an exception to all laws to which other corporations are amenable. Without recognition, either within or without the organization as essential factors of the A. M. A., the members should hardly be expected to possess *esprit de corps* or even to recognize any logical reason for the existence of what can be called only by courtesy an organization, and which under such conditions would be about as logical and effective as would have been a labor union among the slaves of a plantation in antebellum days. *On the conditions surrounding the ultimate elements of an organization, the very life of the organization in the last analysis depends.* History, in its chronicle of the rise and fall of empires, teaches us this, if it teaches anything.

If the membership at large is shown to have no legal rights, there exists a rather suggestive and anomalous condition of affairs, in view of the enormous and increasing business interests of the A. M. A., especially if it should ever become necessary to wind up Association affairs. A large trust fund and a huge business in the hands of a select few, with no legal claim on it on the part of the members, should be a pleasing thing for the latter to contemplate.

Now as to remedies for existing illegalities and irregularities in the A. M. A. and its constituent bodies:

1. Provision by which all members of constituent bodies shall automatically become members of the A. M. A.

2. The popular ballot in the A. M. A. and its constituent bodies, with the up-to-date political "check" system of the initiative, referendum and recall, and nominations by petitions. The balloting can be done by mail, as in the Chicago Medical Society.

Reform as to legality of elections could be accomplished by having the Association, or the House of Delegates, at least, meet annually in Chicago, but I doubt if the membership at large would stand for this. Should the House of Delegates hold a ratification meeting in Chicago, this would require an attendance of two-thirds of its members.

3. A—Provision for the election by direct membership ballot, of delegates to the state and national associations, this method to comprise a just and fair numerical representation.

B—Election of councilors of state societies by direct ballot of each councilor district.

4. Abolition of the voting power of councilors in our state societies, following the precedent set by the A. M. A. in the case of trustees.

5. A card transfer system for members of the A. M. A. who chance to change locations, thus doing away with the present unjust, illogical and absurd system which makes it obligatory on a member to join the district "branch" (*sic*) of the A. M. A. in his new location within one year from the date of his removal, but which is not mandatory on the said district branch. By this system, a man may be dropped from the A. M. A. although his dues are paid and he is willing to comply with the rules of the Association in the matter of joining the district society in his new location.

6. Amendment of the By-Laws so as to prevent multiple office holding. The three most important offices in the Association are at present held by one individual. This places too much power in and imposes too much responsibility on one individual.

7. Provision for an open forum in our state journals and the *Journal A. M. A.* for courteous discussion of the methods and policies of the A. M. A. and its constituent bodies.

8. Provisions for elections in the A. M. A. that shall be conformable to law, granting that the courts support my contention on this point.

The foregoing suggestions constitute the salient points of the reform resolutions adopted by the Illinois State Society at its Danville meeting. As is well known, a strenuous effort was made to prevent consideration of these resolutions. It requires little perspicacity to comprehend the reasons which underlay the opposition to even the consideration of suggestions for political reform. It is a questionable cause that demands for its defense partisan rulings, a chloroforming committee, the omission of an entire day from the time allotted to the proceedings of the House of Delegates, and a partisan attempt at adjournment.

DISCUSSION

H. F. Lewis: There is only time for a few remarks upon this subject, although there is much that might well be said. There is one point to which I wish to call particular attention. That is the set of reforms that were designated in the paper in regard to the open forum and the proper means of criticising things in the national and state societies, especially in the American Medical Association and the Illinois State Medical Society.

What one of us, unless he is properly labeled, can criticise anything in *The Journal A. M. A.*? Have any of you tried? I have, and others whom I know of have and they have not been able to do so. What one of you can get any sign of a criticism into the ILLINOIS MEDICAL JOURNAL? I, and others, have tried but have not been able to do so. Yet both of these journals are used to print the material which these properly-labeled persons want to see published! That is all correct, no doubt, and these people who are properly labeled are no doubt "*the* people," but some of the rest of us are a little bit vain and think that perhaps we have a little wisdom, just a few crumbs that have dropped from the tables of these "Great Folk," which we would like to let get out into circulation. We think that we should at least be given a little corner somewhere that we could see a few of our own things published.

Perhaps I will be pardoned if I refer to a personal experience in this matter. Something has been said of the proceedings in Danville. It was there that the resolutions which embodied the reforms which were mentioned in Dr. Lydston's paper were passed, after strenuous opposition on the part of officials of the State Society. The secretary of the Illinois State Society, Dr. Weis, wrote to the editor of *The Journal A. M. A.* after the Danville meeting stating that these resolutions for which we were contending were not properly passed, that a quorum was not present and that the meeting was adjourned. This was published in *The Journal A. M. A.* and sent broadcast to every subscriber to *The Journal A. M. A.*—some 50,000 of them.

Believing that Dr. Weis was incorrectly informed in that statement of fact, I wrote a short, courteous letter to the editor of *The Journal A. M. A.*, expressing the hope that he would publish my letter.

It is immaterial whether I was right or not (I believed, however, that I was, and there were many others who believed I was). I had a right to be heard. It seems that this letter of mine was very important, although I did not realize

how important in the first place. I received one letter from the assistant secretary, saying that the secretary was absent and that this matter would have to be considered upon his return. Dr. Weis's letter was received during this same absence, and yet it did not have to await the secretary's return. Finally I got a letter from the great man himself in which he stated (very courteously, I assure you) that inasmuch as Dr. Weis was the secretary of the State Society, his letter had been published, but as I was not, mine could not be! I was not properly labeled, and I felt squelched, I assure you! I was not even a delegate to the meeting, I merely went to the society meeting as a private individual and therefore I had no right to be heard.

Dr. James E. Stubbs, second vice-president of the Illinois State Medical Society, then wrote a letter calling attention to this matter. This was also refused publication—not on the ground that he was inofficial, for you see he was, but because the matter not being of general interest to the profession at large, we could hardly expect that it would be published in *The Journal A. M. A.* And the great editor further referred us, in our controversy, to the ILLINOIS MEDICAL JOURNAL as the one most properly concerned. You see Dr. Weis's letter was of general interest to the profession at large, while that of Dr. Stubbs, upon the same subject, was not!

These letters were not even published in the ILLINOIS MEDICAL JOURNAL. One letter, however, signed by twenty-six members, twenty of them delegates to the Danville meeting, all of whom stated that they were present at the meeting when these resolutions were under discussion (twenty is a quorum, you know!) was finally published.

Now there were several letters published by Dr. Collins, first vice-president, who presided at this meeting at the time of the attempted adjournment, stating that he presided and that an adjournment was taken.

Then came the question of the stenographer's report of the meeting. There was a question of veracity and a question of fact. Twenty-six had signed a certain statement. One, Dr. Collins, had sent in a signed statement to the contrary. All of these men were supposedly equally truthful and honorable, and all were equally entitled to the attention of the editor of the *Journal A. M. A.* This controversy could have been settled by reference to the stenographer's notes (the stenographer was a gentleman living in Danville). Of course he could not be asked to give up his notes without an order from the secretary. Here, again, I wrote a letter which was so important that it had to be referred to a higher power—the Council of the Illinois State Medical Society, if you please, from whom I finally received a letter that the said Lewis could not be allowed to receive copies of this stenographer's notes, that an abstract of the reports of the meeting had been published in the ILLINOIS MEDICAL JOURNAL, but with all of the part referring to this matter and the attempted adjournment omitted.

That is my experience and that of twenty-five others. As to the open forum: Where is it? Where can we have any means of having our criticism or our ideas published? There is no place that I know of.

J. F. Hultgen: I think I can speak for a good many general practitioners here in town who attend to their duty and leave aside these controversial questions to which we have been listening for the past two years or more, both in and out of the meetings.

As I look upon these controversies I see in them two factors, on the one side an editor, on the other an educator, one surpassing the other by the breadth of my thumb-nail. Many self-styled pillars of the medical profession are nothing but promoters of dissension.

Let us drop all of this and try to meet on common ground, not on a battle field. What Dr. Lydston has said of legal matters, quoting the law on all of these questions is entirely without interest to the general practitioner. What we need in these meetings is, more scientific medicine and less wrangling over legal points.

We, of course, do not like oppression. It is un-American. There is, to be sure, some truth in the things Dr. Lydston has said. It is essential to do right but it is important to go about this decently and politely. We do not look well as spectators of a dog fight.

I do not mean this as any personal reflection upon Dr. Lydston, whom I first met some twelve years ago. We have always been friendly at our meetings, but since he has taken up the mantle of the medical lawyer and told us all about the un-American Medical Association I think we have a right to say something.

While it is difficult in all of this to locate the kernel of truth, yet I believe there is no sense in looking for the legal side of everything. You remember Caesar said "when right is to be violated, let it be violated for the sake of Government. In the rest cultivate piety." Let us meet on common ground—on the vantage ground of scientific medicine. Let us leave alone government, reforms, and the legal side of it. Just remember that Justice is represented, symbolically, as a woman—blindfolded at that. I should like to know how and where she is going to strike. I should like to know how we are going to get any more justice by going to law than we are getting now. I certainly should not trust anything to the courts but everything to common sense, and then we shall get along very nicely.

Dr. Aria Louis Derdiger: I should like to ask Dr. Lydston a few questions:

1. What is the money used for, which is collected for membership fee and for advertising in the *Journal A. M. A.*, aside from that of publishing the Journal?

2. How much money is expended in the interest of medical science in the form of research work, medical libraries, and donations towards the maintenance of a free hospital and a medical laboratory?

3. Do you intend to ask and abide by the opinion of the Supreme Court as to who and how the officers of the association are to be elected? Or do you intend to have the Court decide whether or not the association has a right to extend the membership throughout the United States and other countries, grant certificates for membership for $5 a year, but not give them the privilege to express an opinion through *The Journal* or have the right to vote for officers, etc.?

4. And will Dr. Lydston be the only complainant in the case when it comes to trial? Will you please inform us who the other defendants are that will appear in court to defend similar claims as members of the association?

5. Will Dr. Lewis explain what he means by those who are labelled as privileged to have their say in *The Journal*?

Charles J. Lewis: I did not intend to say anything in this discussion, but inasmuch as Dr. Hultgen, who has just spoken, seems to think that *The Journal A. M. A.* can do no wrong, I wish to say that *The Journal* absolutely refuses to exchange with other journals which criticise its policies.

Dr. Mai: I have here (showing it) in my possession a medal which was cast at the fourth centennial in commemoration of the burning at the stake of the martyred reformer Johannes Hus (also a doctor, by the way). The circumscriptions are: Johannes Hus, a. d. 1415, is condemned and his words from the pyre, "100 years hence you shall answer God and me." The answer came 1517 in the great reformation (of the Church by Luther). The application: Dr. Lydston and Dr. Lewis—so far they alone—have stated facts and proposed changes relating to the subject matter of reform in the A. M. A.

Will Dr. Lydston's fate be the usual one of the reformer? An answer is due from this assemblage.

Oliver Tydings: To me this is a very serious matter and it should not be lightly considered. It is a question of American independence. It is a question of the right of the citizen against a self-constituted organization (and I thought while Dr. Lydston was reading his paper that they have a precedent in the Standard Oil Company of to-day, an organization without an undisputed legal status, and yet, they know exactly where they stand and there they stand without the right of any one to say nay, by the right of the brute might of wealth).

It seems to me that if there is a defense for the conduct of the affairs of the American Medical Association, that those members who know its innermost workings should be here and defend it before this audience. I should like to ask those in authority if this respectable assembly is not entitled to a hearing at its hands. If they will not give it, then Dr. Lydston's appeal to the only authority who can make them hear is timely and right. When that verdict is rendered I think no man here questions what it will be. If the organization is to stand (and no member of it more earnestly hopes it will than do I) it will have to be understood that it is to be run for the good of all the members and not for the select few.

I have been a member of medical societies all of my medical life and I should be exceedingly lonesome without them. I am proud of our American Medical Association, but I must confess that I am not proud of some of its methods nor of those officers who use the organization for their personal gain. Not that they are not to be respected along certain lines, for they are past masters along lines not much to the credit of mankind.

But getting entirely away from the personnel of the organization and all questions of ulterior motives of some in authority—if this organization is to be perpetuated, if this organization is to stand for higher education and protection to the people, if it is to conserve your interest and mine, it must be organized and perpetuated along legal lines and we must show clean hands in order to advance the interest of an organization worthy of the highest and noblest aspirations of man.

I do not know that I can add anything to Dr. Lydston's position, but I do ask the members of this organization to consider this matter seriously. Take it to heart and see to it that the organization is not only put upon fair, legal grounds but that every question of chicanery and fraud be eliminated from this organization and let it represent and stand for reputable and intelligent citizenship.

George F. Butler: I was referred to as having been present at the meeting in St. Paul when the steam roller went over us. That was my first experience with steam rollers, although I have had them passed over me, backward and forward and sidewise since that time until I have been more or less squelched. I have been hoping almost against hope, that there would soon be found in the profession enough men with backbone to openly and courageously support Dr. Lydston so that he could notice it, and I am glad to see the number is growing rapidly.

Everyone not abnormally prejudiced knows that what Dr. Lydston is contending for is right, that there is nothing but justice in it and I think, as Dr. Tydings has said, we should treat this matter seriously. It is a serious matter.

Dr. Tydings has well said, that at these discussions there are never any representatives of the opposition present who dare deny the truth and justice of Dr. Lydston's allegations. This silence on the part of the gentlemen he refers to is, to say the least, very significant.

F. A. Leusman: I simply arise to second most emphatically every word that Dr. Lydston has spoken and every word that everyone else has spoken with understanding and logic, in earnest, and not in jest. If science has a basis, fundamental, it is free expression, in other words it is truly democratic. The biggest fool, as the evidence shows here to-night, has a right to be heard no matter whether science appears in the garb of theory, practice, policy, philosophy, etc. Eternal vigilance is the price of free thought and free expression.

When power grows insolent from long incumbency in office, when power becomes autocratic and repressive, when power in office uses the power of the office to muzzle any expression of opinion in the columns of its journal not friendly to their infallible (?) method of thinking and doing, it becomes imperative for a community of free and independent thinkers and members of the organization to raise their voices in protest at such usurpation and misapplication of representative power as indulged in by the present secretary and most of the trustees of the A. M. A. Dr. Lydston as the original standard bearer,

seconded, strengthened and reinforced by such leaders in the profession as Drs. Lewis, Tydings and Butler are the forces and agents employed by the evolutionary process to democratize in a scientific manner the future management of the affairs of the A. M. A. to the end that every man will not only in fiction but in truth have a vote and a voice free as the air and not strangled by the impudent assumption of authority delegated to unworthy representatives.

For the purpose of curbing all disposition to insolence on the part of our servants in office—the secretary and the trustees—we must make our officers of the A. M. A. immediately answerable to the members by instituting the recall, referendum and initiative, three potent weapons for use in case of necessity by all the members of the A. M. A., superseding delegates, trustees and secretary.

Dr. McKinlock: If such a motion is in order I should like to resolve that a vote of thanks be extended to Dr. Lydston for his very able paper and the manner in which he has presented this subject.

Seconded and unanimously carried.

Dr. Snyder: I move that this vote read that the rank and file of the membership of the Chicago Medical Society endorse the sentiments expressed by Dr. Lydston.

Dr. Emil Ries (Chairman pro tem): That would be impossible, Doctor.

Fred A. Leusman: I will amend that, with your permission, to read that those members of the Chicago Medical Society here present endorse the sentiments expressed in this paper.

Dr. Emil Ries: Will you, then, state the motion in full, as it now stands?

Fred A. Leusman: *Resolved*, That the sentiments expressed by Dr. Lydston in his paper and by Drs. Lewis, Tydings and Butler are heartily endorsed by the members of the Chicago Medical Society here present.

Seconded and carried.

Oliver Tydings: I was going to remark, before the motion was put, that it would have been impossible for Dr. Lydston to have read this paper before this society five years ago, or even one year ago. I take it as a favorable omen, gentlemen, that the paper is not only read, but that thanks are tendered the author.

G. Frank Lydston (closing discussion): I read only a short time ago in one of the journals devoted to the promulgation of certain medico-political views that I was the only insurgent in the A. M. A. I felt very proud of the distinction. To-night I find that there are many others. I do not know why the gentlemen who were invited to appear to-night to discuss this paper are absent. There is not a member of the society who knows anything of the work I have done in this cause who does not know that I have always made public what I was going to do and when I was going to do it, and if anything or anyone's views have been criticised and he has had anything to say in defense he has always been given an opportunity to say it. I should like to have heard from the other side. I have frequently been told by its defenders that I am wrong, that I do not know what I am talking about. I have even been accused by machine journals of being a paranoiac on the question of medico-political reform. Well, perhaps I am, but I assure you that I shall continue to be until the points at issue have been finally and effectually disposed of, when I shall return to the more profitable occupation of sawing wood for the family stove.

The president-elect of the American Medical Association, the chairman of the Board of Trustees, the manager-editor-secretary and several others who have done active work trying to suppress my views, were all invited to be present.

In answer to the gentleman who dragged out the name of our late Julius Caesar and asked me to think of him, I will state that the hint was unnecessary. I have thought of Julius Caesar constantly ever since this campaign began, and every time I have thought of what happened to him I have wept tears of joy.

Dr. Derdiger brought up the question of the money side of A. M. A. affairs, I have not gone into that. I presume it is all used in the management of the Association, the publication of *The Journal A. M. A.*, and for the trust fund.

If I knew that it was being put to any improper use you may be very sure that the membership at large would hear of it. The management should give us yearly a complete financial statement, it is true, but perhaps that is of no consequence. The inner circle says it is not.

Dr. Derdiger also asked me what I expected to find out by resorting to the courts. I merely want to find out whether or not I know what I am talking about. I have been told by certain A. M. A. officials that I do not. If the organization is legal, as the Association now stands, well and good. If it is not we want to know it and see that matters are put right. I have nothing to lose, no matter which way the decision goes. Some other people are in danger of losing everything. What we will get, if the decision goes my way, will be the ballot. Give us the ballot for one year and if we don't clean house I'll be surprised.

If my position is not upheld, it means that the court will have to reverse every precedent that has ever been formulated on the question of corporation law. This vitally concerns everyone who is interested in stocks and bonds.

As to the growth of the reform movement: even one year ago it would have been impossible to have presented this paper before this society. Some who believed in the reform movement were afraid, and some of the opposition were over modest. I have letters from editors of some of the most prominent and influential independent medical journals in the country in which they tell me that they are heart and soul with the reform movement, but are afraid to support it openly; that they would be ruined if they did so. One gentleman wrote me five long pages, on returning a paper which he had asked me to write for his journal. He told me the whole story of his life, and how he at last had his journal where it was paying, and said that he did not dare to jeopardize his business interests by publishing my paper and thus bucking against the machine. The editor of a medical journal in St. Louis asked me for a political article just prior to the meeting of the Mississippi Valley Meeting two years ago. Shortly before the meeting he returned the paper, saying that, although he was with me heart and soul, he did not dare publish it lest the machine should put him out of business.

You see what we are up against. We have three A. M. A. journals under the control of one man and we have new journals contemplated which will cover the whole field of medical scientific publications. When once these journals are established, the powers that be will absolutely control medical advertising and medical publication in the United States, and there is not one of you who could publish anything unless you were *persona grata* to the ring. I think I know human nature pretty well and I believe that when one gets thoroughly embued with the financial side of any movement, something of the trust element is bound to come in.

Now as to the reform movement: There is a reform movement, and it is no longer a one-man movement. We now have an organization, one which intends to carry on the fight until everyone in the profession is so strongly in sympathy with its ideas that he does not care who holds office so long as the Association is run upon democratic lines, and we have a reform brand of harmony that really harmonizes. I merely mention this because it has been stated that the new organization was formed in the interest of a certain public official. This statement is false, for I assure you that the new organization was formed solely to promulgate the reforms I have suggested and to keep the flag flying. The profession may rest assured that we will not stand for anything that is not to the best interests of the rank and file and of democracy.

ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF THE ILLINOIS STATE MEDICAL SOCIETY

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MAY, 1911

DR. LYDSTON AND THE A. M. A.

There appears in this issue a paper, and the discussion, by Dr. G. Frank Lydston, read at a recent meeting of the Chicago Medical Society. The editor of this journal would be derelict in his duty if he allowed one of the statements in the article to appear without a protest, because he, the editor, has personal knowledge of the facts. The paper contains this statement, in reference to the reorganization of the American Medical Association:

> "The minority report was suppressed by the physician who was given it to read before the Association. Although the ayes and noes were called for, the president ignored the call and ignored the protesters against the railroading, refusing to recognize any member of the minority in the executive session. I voted against the clauses, individually and collectively, pointing out *ex post facto* factors and the illegality of that, and of the summary action. The minority report which was suppressed by the man intrusted with it, embodied these ideas."

The editor, who had just left the presidency of the Illinois State Medical Society, presided at the meetings of the large committee on reorganization of the constitution and by-laws of the American Medical Association, held in the parlors of the Hotel Ryan on June 2 and 3, 1901.

He personally knows that this committee, after an all-day session, endorsed the report of the special committee. He saw the signatures of delegates from twenty-seven state organizations, the Army and the Marine-Hospital services attached to the report. He later attended the meeting of the General Executive Committee when the whole subject was threshed out. He was present when it came up in the general session and witnessed the triumphant endorsement of the new constitution and by-laws. But he does not remember any minority report or any refusal to recognize any one.[1]

In regard to this matter, the following statement is made by Dr. C. A. L. Reed, of Cincinnati, who was president of the Association and who presided at the meeting:

> "At the St. Paul meeting constitutional requirements had been met by the publication, in 1900, of the action contemplated in 1901. There was no minority report from the Committee on Reorganization. If the Conference Committee, presided over by Dr. Kreider, had such a report I never heard of it. If there was such a report it was the business of those who signed it, not to give it 'to a physician,' but to present it to the General Session. I never declined to recognize anybody. There never was a parliamentary call or, so far as I remember, even a shout from the floor for the ayes and noes on the adoption of the report. There was no debate in the General Session, nor any demand for debate, which had been exhausted before the large Conference Committee. If Dr. Kiernan, as alleged, there spoke and voted, clause by clause, against the new constitution, it follows that the new constitution must have been submitted clause by clause and there must have been both free speech and a free ballot. If this is true I fail to see what the present row is about. What I do know is that the new constitution was adopted by the large General Session with unanimity and enthusiasm. And I know, furthermore, that as the sequel has proven, the whole thing was done with an intelligent and conscientious regard for the right of the individual member."

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1. At the Atlantic City session (1900), a committee of three was appointed to take up the whole matter [of reorganization] and to suggest changes which would cover the entire country and unite the profession into a solid and well-organized body. This committee first studied the plans of other organizations, especially medical bodies, including particularly the various state and county societies. On the results a tentative plan was outlined which, however, differed essentially from that finally recommended and adopted. The committee held meetings in different cities, calling on local men for suggestions, advice and criticisms, which were forthcoming and resulted in modifying the original scheme. A plan was then drafted and 500 copies of it were sent to as many physicians in the various parts of the country from whom many valuable criticisms and suggestions were received. The plan, still further modified and accompanied by an "argument" of some 5,000 words, was then printed in THE JOURNAL two weeks before the meeting in order that all members might have an opportunity to become familiar with it.

At the St. Paul meeting, in 1901, the matter was referred to a large committee composed of one member from each state and of the standing business committee, itself including thirty-nine members, making in all a committee representative of the whole country. Several sessions were held and every phase of the subject was discussed with thoroughness, further modifications and changes being suggested. This committee finally recommended the new constitution and by-laws, and the next day the general meeting adopted them, almost unanimously. Probably no subject of interest to the medical profession was ever given more careful thought and study by so large a number of competent men as was this problem of the reorganization of the national, state and county societies—in other words, the organization of the medical profession of the United States. The final result was not the work of a few men, but of hundreds of the most prominent and able members of the medical profession.—[Editorial, Journal A. M. A., March 12, 1910].

Dr. Lydston makes considerable of the fact that he requested certain officials of the A. M. A. to be present and discuss his paper, and that not one of them responded. The reasons why they did not do so would readily suggest themselves to any one familiar with the methods which have been pursued by the author in this matter. For some time past he has persistently carried on a campaign of personal villification against those same individuals. One cannot debate an issue by abusing one's opponents, and when one prefaces one's remarks with statements to the effect that his opponents are rascals, acting with iniquitous intent, he cannot expect the latter, if gentlemen, to discuss their actions with him. For instance, in his remarks on the legal aspect of the A. M. A., he says:

"I will not dwell at length on the fallibility (to use a mild word) of the opinions and advices of corporation lawyers in general, when retained by the particular corporation whose acts legal advice and opinions are purchased to sustain. I will merely state that as is well known, they are prone to give the sort of opinion and advice which most nearly suits the policies of their clients. I suspect that the 'eminent counsel' in this instance, were no exception to the rule as to advice in the matter of evading legal issues and cutting legal corners."

This is a direct insult to the Trustees of the A. M. A., as well as to their attorneys, as it intimates that the former were dishonest and wilfully tried to have the Association's acts illegal, and that the latter were corrupt and venal in that they deliberately sold to the former opinions which they knew to be wrong. When one descends to such a level he cannot hope to have honorable men follow him to discuss actions. Some people never learn the difference between a debate and abuse.

As to the charter of the A. M. A., it is a public document open to the inspection of all. Every official act of the Association done thereunder, has been openly published in THE JOURNAL, so that every person has had full knowledge thereof.

As regards the question of incorporation, Dr. Harris writes as follows:

> "The American Medical Association was first incorporated in 1897, and the Trustees placed the matter of preparing the articles of incorporation in the hands of competent counsel. When reorganization was effected about ten years ago, the Board of Trustees again submitted the matter to other counsel. About four years ago the House of Delegates appointed a special committee and authorized it to employ legal counsel for the purpose of considering the possibility and the advisability of obtaining a national charter for the A. M. A. This committee employed counsel in New York City, but after working on the subject for a year or more the committee concluded that a national charter was out of the question, and so reported to the House of Delegates. As a matter of fact, this whole matter has been gone over by four different law firms since the incorporation, not including the counsel employed by the special committee in New York.
>
> "Does it seem at all probable that all of the Trustees who have served the Association, from the first down to the present, were dishonest, and that all of the legal gentlemen whose advice has been

followed were corrupt and venal? If there are defects in the present method of conducting the affairs of the Association they are due to defects in the law itself, and not in the Association, and are applicable to every other similarly incorporated body, of which there are many."

The Chicago Medical Society has nominally 2,200 members, more than most of the state organizations composing the American Medical Association. It has 14 branches, the interests of whose members, according to the present arrangement, rest largely in the hands of the council of the Chicago Medical Society, a body of about 50 members. This council, as we understand it, has elected for two years delegates and alternates to the State Medical Society, and given them instructions as to their actions at the meeting of the State Society, which instructions have been obnoxious to a very large percentage of the members of the Chicago Medical Society. Certainly the methods of electing and instructing delegates from the Chicago Medical Society to the State Medical Society, have been most undemocratic, and yet as far as we know Dr. Lydston has never raised his voice to change the present methods of electing those delegates.

It is hardly worth while to take space to discuss other matters in Dr. Lydston's article. To paraphrase the words of another: that which is good in the remedies suggested is not new, and that which is new is not good.

THE NEW YORK WORKMEN'S COMPULSORY COMPENSATION ACT UNCONSTITUTIONAL

On March 24 the New York Court of Appeals handed down an opinion written by Justice Werner in the case of Ives *vs.* South Buffalo Crosstown R. R. Co., which finally settles the unconstitutionality of the recently enacted Workmen's Compulsory Compensation Act of that state, on the ground that it deprives the employer of property without his consent and without due process of law. The opinion will sound a note of warning in the states of Ohio, Illinois, Massachusetts, Minnesota, Wisconsin, New Jersey, Washington, Montana and Michigan,[1] where legislation looking toward statutory compensation for industrial injuries is now pending or in contemplation—these states also have supreme courts.

1. The last session of the Indiana legislature passed a modern Employers' Liability Act. The New Jersey Workmen's Compensation Act pledged by Woodrow Wilson was changed, at the last moment, and after the publication of the New York opinion, from an obligatory to an optional plan, and has just received the Governor's signature. We are now threatened with a plague of state laws—no two alike—bearing on this vexed question, and through lack of concerted action and uniformity in legislation are likely to land in a bog that will make our present predicament seem like good going. If there is any doubt but that the committee from our present legislature is on dangerous ground in recommending at this time the Workmen's Compensation Act prepared for the Illinois Liability Commission by Mr. Samuel Harper, it should be removed by a consideration of Dean Wigmore's plea in the April Illinois Law Review against "Playing a lone hand in Workmen's Compensation Legislation in Illinois." The dean contends that the Harper draft, even if enacted, would not stand the ghost of a show of being made a standard for uniform state laws, and urges that Illinois refrain from legislation until one of the bills recommended either by the National Civic Federation, the Conference of State Liability Commissions, or the Committee on Uniform State Legislation shall have been agreed on as a standard for all states.

The court decides that the statute traverses not only the state constitution in denying the right of jury trial, but also that of the United States in disregarding the fifth amendment. The police power of the state is held to be inadequate to reach the conditions dealt with by the statute. The court holds, however, that the legislature has the right at any time to correct, by revision of the existing Employers' Liability Act, abuses which have crept into legal practice under the titles of "contributory negligence" and "fellow servant." Thus the injured workman, who happens to live in New York, again sees little outside of a constitutional amendment or a lawsuit which is likely to lead him to a realization of the modern idea of workmen's compensation.

It will be remembered that the New York legislature also passed an *optional* compensation act which is still untested in the courts; but the uselessness of the Massachusetts act of 1902 forebodes that little will be accomplished by any optional law toward mitigating the predicament of the injured workman.

This decision will seem like nothing short of a catastrophe to the many who have taken either a practical or academic interest in the supposedly completed labors of the New York Employers' Liability Commission. If there still lurked any doubt, we are now prepared to concede that our ancestors certainly prepared in the constitution a social contract as unbreakable and as unyielding to modern conditions as an old-fashioned strong-box.

The decision has gone a long way toward crystallizing the conviction already nascent throughout the community, that our courts as at present constituted are a hindrance rather than an aid toward industrial progress. The truth is, our judges need larger educations for their larger duties in our modern industrial world; not in law—Heaven forbid, they have enough of that already—but in civics, economics, morals, and the humanities. And they need to cultivate a sufficient sense of proportion, orientation, and environment to lift them above the meticulous routine of their own calling. We are making the uncomfortable discovery that a judicial hierarchy is about as genuinely in sympathy with modernism as were certain ecclesiastical functionaries in the days of Moses and Martin Luther. Truly, times may change, but the mind of man, when it clothes itself in the archaic mysteries of law or theology, never. Humor cannot penetrate, nor common sense or public necessity dissolve the oracular mask behind which the high priests of our judicial Memnon spin fine constitutional reasoning to trip the unwary statute. Courts may reverse each other—themselves even—they are still solemnly infallible; but let the ill-starred statute vary the breadth of a hair from the strict letter of that fifth amendment which has become the unwitting bulwark of the incorporated American individual, and—bing! it goes into the ditch. Like the circuit rider's horse, courts nowadays seem to say little besides "property, property."

There is a touch of unconscious humor in the timorous glance of recognition which this New York judge throws toward that advancing

tide of public opinion which may in another generation rise high enough to deprive our judicial priesthood of its most cherished and most dangerous asset—the use, or abuse, of constitutional exegesis to overturn statutes. An asset, by the way, which other nations have refused to concede to their courts. "Courts must regard philosophic, economic and moral theories, however attractive or desirable they may seem, as subordinate to the primary question whether they can be molded into statutes without infringing upon the letter or spirit of our written constitutions." Pure cobweb, plus megalomania, spun out of the ratiocinations of several generations of judicial imagination. How lamentably does this decision fail not only in cooperating with, but even in recognizing the spirit and necessities of our time. Were His Honor to spare a little of his valuable time to watch our surgeons as they remove a few of those unpaid-for hands and feet which are an hourly tribute to industry, he would hardly regard the situation as bred in the classroom or the study. This learned court seriously regards the present dilemma in which the master and his injured servant find themselves—and for which dead and gone English and American judges are themselves largely responsible—as a theoretical one, and complacently propounds—another theory. Having the added advantage of the last word, and seeing no farther from the depths of its cloistered chambers than the end of its own nose, the learned court of course decides in favor of that theory which happens to have taken root most deeply in the rules and precedents hedging about its own judicial mind—but pure theory none the less. The observer is reminded of that unlucky saying which decided the political fortunes of another distinguished and insulated New Yorker—"the tariff is a local issue."

This episode also brings the well-wisher of American progress closer to the conclusion—already obvious to our foreign critics—that the interpretative function, which our judges often go far out of their way to assume, is not an unmixed blessing, in so far as the judiciary feels itself called on to usurp legislative duties under the cloak of constitutional protection. Truly the courts have become the real rulers of our latter-day republic. And it must be said as a sad corollary and in all seriousness that, in these days of national peace and industrial warfare, the Lord is with the highest-priced lawyers.

Nor are these the only counts in the indictment which the decision in the Ives case leads the citizen to draw against our judicial system. Where do we find stability of reasoning, or inexorable logic in Supreme Court decisions—especially if we compare those of different states? Why should these decisions on strictly constitutional or statutory points be as uncertain as the movements of the stock exchange? And why should our courts be so shrouded in their own mystery and dignity as to be incapable of giving advice or furnishing their opinions on important matters of pending legislation? Beyond the fact that opinions will always be found in line with that dead fetish of "constitutional defense" which the courts have carried around like a sacred ark ever since the day of John Marshall and the Dartmouth College case, no sane man can safely prognosticate what any decision will be on any given subject, or whether decisions in

two states will support or nullify one another. How then is it possible for legislatures to enter on intricate law-making involving the prolonged and costly work of legal and economic commissions, when there is no certainty that, in the end, their labors will not be pitched into the waste basket by courts which must or should have known months beforehand just what was going to happen. There seems to be at present no method by which the judicial tongue can be loosened in time to save delay in the preparation of valid statutes, but it is no secret that if we are to maintain our respect for law and judiciary some such technic must presently be grafted into our system. For if there is any real virtue in Supreme Court decisions, there should have been an open way by which that great body of lawyers, scientists, legislators, employers and employees which, at great and useless loss of time and money, prepared and espoused the New York law, could have been sufficiently warned that they were on untenable ground. Nor should it be necessary to have to leave it to a single bright corporation attorney with a single concrete case before him, to discover and prepare the window through which the judicial cat was to be coaxed to jump.[2] After such an expenditure of treasure and brains—coupled with the enthusiastic support of a governor who now sits on the supreme bench of the United States—this legislative effort and its judicial *débâcle* is a ridiculous fiasco exposing the arteriosclerosis which has overcome the system left us by the Federal Convention of 1787. Surely if we are not to be again humiliated by our own courts in the eyes of the world, there must be a feasible method soon devised by which opinions can be extracted from responsible courts before instead of after legislative projects have become solidified into statutes.

W. H. ALLPORT.

HARMONIOUS HOOPESTON

Among the smaller cities of Illinois Hoopeston, located near the northern line of Vermilion County eight miles from the Indiana line, and containing about 5,000 inhabitants, is worthy of consideration not only as a city peculiar in its political history, but worthy of imitation medically. The Editor was invited some years ago to address the society then known as the Tri-County Society, embracing Vermilion, Ford and Iroquois Counties, but for some reason was unable to meet the engagement. Having kindly forgotten his failure, the society, now a local organization but still drawing members from the three counties, renewed the invitation, which was accepted and the visit made Monday, April 24, 1911.

Hoopeston was found to be a little city situated in a beautiful country with some fifteen miles of paved streets, graveled hard roads leading to the country in every direction, and so thoroughly "dry" that the subject has not been voted on for many years. The city is under the old form of

2. The writer is reminded of a retort once shot over his desk by the late Judge Gary at a loquacious attorney who failed to realize when he had a good thing: "Young man, I've already ruled in your favor; if you say anything more, I'll rule the other way."

government with a mayor and common council, and it is a peculiar fact that the mayor receives an annual salary of fifty cents and each councilman twenty-five cents. One would naturally suppose from experience in other Illinois municipalities that the salary would be merely a blind to a large graft somewhere on the side, but we were assured by all parties with whom we conversed that graft was absolutely unknown in the government of the city. At the recent election several prominent citizens contended for election to the mayoralty, the desire to serve seemingly being to have one's name enrolled among the honorable list of high-minded citizens who had previously filled the chair. Dr. A. M. Earel, a graduate of Rush in 1891, is one of the councilmen, a position to which he was recently reelected. Notwithstanding the absence of the revenue of the licensed saloon, the city is well paved, well lighted and supplied with an excellent quality of water, and possesses a chamber of commerce building which does credit to the community. The streets are clean, the houses well built. The business establishments show evidences of progress and prosperity. Several large canning establishments have been established in Hoopeston and give employment to hundreds of employees in the factories and fields. Dr. William P. Peirce, our old and valued friend, had passed to his rewards but a few weeks before, after a long and honorable career, the failure to see him being the only disappointment in our visit. Dr. A. J. Clay, secretary of the organization, and Dr. L. B. Russell gave us a warm welcome at the depot, which only ceased when we took the train for home. Dr. Clay's excellent wife had prepared a banquet at the Doctor's residence, which was attended by every resident member of the profession save one, and in addition the dentist and osteopath practitioner of the town were also there. Probably the method of treating the osteopaths in this community is peculiar and worthy of imitation. Two osteopaths practicing in Hoopeston some time since left the town, abandoned this cult and took a course in medicine. It seems that the present osteopathic practitioner recognizes the limits of his profession and frankly states that he intends taking a course of medicine at the earliest opportunity.

Soon after the banquet the members of the society gathered in the parlors of the Chamber of Commerce Building and were joined by a number of others from the surrounding cities who had made the journey in their automobiles on the excellent roads. Dr. Leroy S. B. Jones presided. It is hoped a profitable hour was spent at the meeting. The paper was discussed by Drs. Adsit, Johnson, Mason and McCaughey. The Editor only regrets that he was not able to pass a longer time with this excellent organization. He takes pleasure in praising Hoopeston as a city unusually harmonious as regards its medical profession, one in which each practitioner seems to vie with the other in saying nice things about his brother. As a consequence all of these gentlemen have the appearance of prosperity and undoubtedly the citizens of Hoopeston themselves are the gainers in the better service rendered by men having mutual respect and good will, and regard for themselves and the profession which they practice.

EXAMINATION FOR PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE

TREASURY DEPARTMENT
BUREAU OF PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE

WASHINGTON, D. C., April 5, 1911.

A board of commissioned medical officers will be convened to meet at the Bureau of Public Health and Marine-Hospital Service, 3 B Street, S. E., Washington, D. C., Monday, May 22, 1911, at 10 o'clock a. m., for the purpose of examining candidates for admission to the grade of assistant surgeon in the Public Health and Marine-Hospital Service.

Candidates must be between 22 and 30 years of age, graduates of a reputable medical college, and must furnish testimonials from responsible persons as to their professional and moral character.

The following is the usual order of the examinations: (1) physical; (2) oral; (3) written; (4) clinical.

In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate.

The examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise consists in examination in the various branches of medicine, surgery, and hygiene.

The oral examination includes subjects of preliminary education, history, literature, and natural sciences.

The clinical examination is conducted at a hospital, and when practicable, candidates are required to perform surgical operations on a cadaver.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur.

Upon appointment the young officers are, as a rule, first assigned to duty at one of the large hospitals, as at Boston, New York, New Orleans, Chicago, or San Francisco.

After four years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon.

Promotion to the grade of surgeon is made according to seniority and after due examination as vacancies occur in that grade.

Assistant surgeons receive $1,600, passed assistant surgeons $2,000, and surgeons $2,500 a year. Officers are entitled to furnished quarters for themselves and their families, or, at stations where quarters cannot be provided, they receive commutation at the rate of thirty, forty, and fifty dollars a month according to grade.

All grades above that of assistant surgeon receive longevity pay, 10 per cent. in addition to the regular salary for every five years' service up to 40 per cent. after twenty years' service.

The tenure of office is permanent. Officers traveling under orders are allowed actual expenses.

For further information, or for invitation to appear before the board of examiners, address "Surgeon-General, Public Health and Marine-Hospital Service, Washington, D. C."

TWO PROMINENT MEMBERS SICK.

Dr. E. Fletcher Ingals, a past president of the State Medical Society, and Dr. J. B. Murphy of Chicago, President-elect of the American Medical Association, are suffering with typhoid fever at their homes in that city. We take this opportunity to offer the sympathy of the profession of Illinois to these distinguished gentlemen, and to express the hope that they will soon be restored to their usual health and usefulness.

ANOTHER LOCAL JOURNAL.

The Brainard District Medical Society, an organization of the central part of Illinois, with a long and honorable history, and which has its headquarters in Lincoln, Logan County, has entered the editorial field by issuing the Brainard District Quarterly, the first copy of which has reached our table. Dr. H. S. Oyler is the Secretary-Editor, and no doubt will make a success of this publication. A number of advertisements of druggists and business houses will probably pay the greater part of the expense of issuing this publication.

We welcome the Quarterly to the ranks of Illinois Medical Journals.

Correspondence

NOTICE TO COUNTY SECRETARIES

OTTAWA, ILL., April 15, 1911.

Dear Doctor:—The council at its last meeting instructed me to write to the secretary of every component society insisting that the provisions of the constitution and by-laws must be complied with in reference to the election of your delegate, that is to represent your society in the House, at the annual meeting at Aurora.

I also desire to call your attention to the rule adopted by the House of Delegates of the State Society which is to the effect that no delegate from a county society shall be seated unless he brings proper credentials from his society, certifying to his election or appointment. These credentials shall be signed by the president and secretary.

About two months ago I mailed to every county secretary duplicate credential blanks, which please use as instructed in my letter accompanying same.

The object of this reminder, Doctor, is that you will be certain to elect a representative who will be sure to go and who will remain from

the first to the last session of the House of Delegates. The custom which formerly prevailed of electing or appointing a member of the county society who happened to be present at the annual meeting where the regularly elected delegate and alternate have not appeared has met with serious objection and at our last annual meeting quite a number of those were refused admittance to the House.

Therefore fail not to have the delegate bring with him his proper credentials and to send me a copy. Should you not have another meeting before the state meeting, please send this letter to the delegate. And now, Doctor, please allow me to urge you to follow the instructions here given. If you do so, it may save us many vain regrets.

Fraternally yours,

E. W. WEIS, Secy.

ANNOUNCEMENT OF THE AMERICAN RED CROSS

AMERICAN RED CROSS, NATIONAL HEADQUARTERS
ROOM 341, STATE, WAR AND NAVY BUILDING
WASHINGTON, D. C., April 24, 1911.

To the Editor:—The American Red Cross announces, in connection with the International Conference of the Red Cross which will be held at Washington, D. C., in May, 1912, that the Marie Feodorovna prizes will be awarded.

These prizes, as may be remembered, represent the interest on a fund of 100,000 rubles which the Dowager Empress of Russia established some ten years ago for the purpose of diminishing the sufferings of sick and wounded in war. Prizes are awarded at intervals of five years, and this is the second occasion of this character. These prizes in 1912 will be as follows: one of 6,000 rubles, two of 3,000 rubles each, six of 1,000 rubles each.

The subjects decided on for the competition are:

1. Organization of evacuation methods for wounded on the battle field, involving as much economy as possible in bearers.
2. Surgeon's portable lavatories for war.
3. Methods of applying dressings at aid stations and in ambulances.
4. Wheeled stretchers.
5. Support for a stretcher on the back of a mule.
6. Easily portable folding stretcher.
7. Transport of wounded between men of war and hospital-vessels, and the coast.
8. The best method of heating railroad cars by a system independent of steam from the locomotive.
9. The best model of a portable Roentgen-ray apparatus, permitting utilization of x-rays on the battle field and at the first aid stations.

It rests with the jury of award how the prizes will be allotted in respect to the various subjects. That is to say, the largest prize will be awarded for the best solution of any question irrespective of what the question may be.

Further information may be obtained by addressing the Chairman, Exhibit Committee, American Red Cross, Washington, D. C.

Very respectfully,

CHARLES LYNCH,
Major, Med. Corps, U. S. Army, Chairman, Exhibit Committee.

WAS THIS A MATERNAL IMPRESSION?

To the Editor:—Mrs. H., age 19, primipara was delivered of a 2½ pound child at full term April 10, 1911. There was no trace of a nose, in nasal passages on the face or in the mouth. Mouth and throat were normal. The eyes were small and round like bullets, no eyelashes or eyebrows. There were no orbits, eyes were set on side of face, twice the normal distance apart. There were no ears, just little buds in the normal locality ¼ inch in diameter. Head, neck, shoulders, arms, hands and legs were normal. Feet normal except the toes, there being only two on each foot which were exactly alike, they being much longer than normal, without any nails on them. There was imperforate anus, and an effort was made for both sexes. There was a rudimentary scrotum. No penis and a trace of the labia and elitoris. No urethra. About 8½ months before birth of child, mother was scared until she almost fainted at a snake in the wood-shed at her home. The snake was a viper. When she saw it the head was erect, eyes protruding and darting its tongue here and there, making a hideous sight. The child's tongue was longer than normal which it protruded like a snake. The child cried lustily at birth and lived 12 hours, having to breathe through its mouth; it was not able to swallow. Father is 23 years old, and only 5 feet high. Mother is 4 feet, 11 inches high, both in perfect health. Mother and father both white Americans. Child was cyanosed, blue and cold.

J. H. RAINWATER, M.D.
New Canton, Ill., April 14.

VICE-PRESIDENT STUBBS APPLIES THE HAMMER

CHICAGO, April 28, 1911.

The venerable Dr. James E. Stubbs has during the past year taken up so much space in the columns of THE JOURNAL that we are glad to give space to his "swan song" in the following letter to the Editor:

GEO. N. KREIDER, A.M., M.D., Editor Illinois Medical Journal, Springfield, Ill.

My dear Doctor Kreider.—Through your great kindness I have received my manuscript on Scarlet Fever and the State Board of Health.

I am very much obliged to you for being so considerate. I should have felt very much chagrined if it had been published. I did not realize that it was so "trivial," and the subject was too "trivial" to warrant giving valuable space in your journal for the discussion of so "trivial" a subject. But Doctor, did you realize, did you understand that you gave as much if not more space, in your very valuable journal, for one to make ridicule of me and my knowledge and thereby try to stick a knife in my back? And then to think that it was "too trivial" for me to try and square myself with the profession. Doctor, that was

cowardly. Perhaps I am a fool, but not as large a one as you think me. You pose as an A.M. as well as an M.D., but one would, on reading your editorial, suppose that you were just on the verge of entering some high school, and my article was "too trivial" to take up space which you appropriated to write your screeds against the State Board of Health. Why, my dear Doctor, the secretary of that Board is so far ahead of you that you are outdistanced in the first lap. You consider your journal the organ of the State Medical Society, but it sounds more to me like a hurdy-gurdy with asthma.

Do you consider that THE JOURNAL is published for your own individual benefit? What a victim to such an hallucination. Why Doctor, your editorials are insipid, dull, flat, without savor, tasteless, slush. Why, my "too trivial" article is classical English compared to your effusions of so-called editorials.

Learn to treat a fellow practitioner with due respect.

Ultima ratio.

Respectfully, JAMES E. STUBBS, M.D.

OFFICIAL PROGRAM

PROGRAM OF THE SIXTY-FIRST ANNUAL MEETING OF THE ILLINOIS STATE MEDICAL SOCIETY, AURORA, MAY 16, 17, 18, 1911

ORDER OF PROCEEDINGS

Registration office in the basement of People's Church, corner Main Street and Lincoln Avenue.

FIRST DAY—TUESDAY—AFTERNOON

3:00. Call to order of Secretary's Conference, in People's Church, by D. G. SMITH, Elizabeth.

FIRST DAY—EVENING

8:00. Call to order of House of Delegates, in People's Church, by PRESIDENT A. C. COTTON, Chicago.

SECOND DAY—WEDNESDAY—MORNING

9:00. Call to order in General Session by the President, in the People's Church.

Invocation by REV. E. H. MONTGOMERY, Pastor First Presbyterian Church.

Address of Welcome by THOMAS W. SANDERS, Mayor of Aurora.

Address of Welcome by C. H. FRANZ, President of the Fox River Valley Medical Association for Kane County.

Response in behalf of the Society by the President.

Report and announcements of the Committee of Arrangements by CHAIRMAN J. W. MCDONALD.

9:30. Call to order of the Sections, for reading and discussion of the papers of the program, in the People's Church.

12:30. Adjournment for luncheon.

SECOND DAY—AFTERNOON

1:30. Call to order of Sections, for the continuation of Scientific program.

Adjournment.

SECOND DAY—EVENING

8:30. Reception, concert and luncheon, to be followed by a dance, by the local profession.

THIRD DAY—THURSDAY—MORNING

8:30. Call to order of the Sections, for the continuation of Scientific program.

12:00. Call to order of Medico-Legal Committee, in Divikey Hall, by H. N. MOYER, Chicago.

12:30. Adjournment for luncheon.

THIRD DAY—AFTERNOON

1:30. Call to order of the Sections, for the continuation of the Scientific program.

Special Order—Oration in Surgery: "Uterine Hemorrhages: Diagnostic Aspects," JOHN G. CLARK, Philadelphia, Professor of Gynecology in the University of Pennsylvania.

2:30. Special Order (general public invited)—Oration in Medicine: "Some Gifts of Medical Science to the World," by WILLIAM E. QUINE, Chicago, Professor of Medicine and Clinical Medicine.

President's Address—"Conservation," A. C. COTTON.

4:00. Call to order in General Session by the President, to receive report of House of Delegates.

Induction of President-Elect.

Final Adjournment.

NOTE: WEDNESDAY—1 P. M.—Reception for the ladies at the Y. W. C. A., lunch and automobile rides.

THURSDAY MORNING—Auto-ride and breakfast for the ladies at Y. W. C. A. at 9 a. m.

The Medical Program will begin at 9 a. m., May 17.

1. The Medical Service of the Illinois State Hospitals. Charles F. Read, M.D., Watertown, Ill.

Synopsis: **General introduction. Hospital vs. custodial idea. Outline of work among the insane five and ten years ago. Present day conceptions in and out of institutions. Writer actuated by a desire to impress upon the profession of the state, the fact that the state service among insane stands for a scientific endeavor. Mental examination is a psychologic inquiry leading to a case-analysis which has in view the determination, in functional psychoses, of the mechanism of their origin. Psychoanalysis—word association test—psychotherapy. Laboratory research—psychologic and physical. The Psychopathic Institute. Hospital care of the physically sick; facilities. The question of operative interference. Nursing. Re-education. Ideals.**

Discussion opened by Frank P. Norbury, M.D., Kankakee, Ill.

2. Experimental Transplantation of Legs. V. D. Lespinasse, M.D., G. Carl Fisher, M.D., J. Violet, M.D., Chicago.

Synopsis: 1. Rationale of the operation. 2. Why do we amputate in the ordinary crushing injury? 3. Causes of failure. 4. Repair of the various structures, skin, nerve, bone, muscle, fascia, blood-vessels and lymphatics. 5. Blood-vessel technic used. 6. Work of other experimenters. 7. Results obtained to date. 8. Application of these experiments.

3. The General Practitioner and Preventable Blindness. Thomas A. Woodruff, M.D., Chicago.

(Synopsis not received.)

Discussion opened by J. W. Smith, M.D., Bloomington.

GYNECOLOGICAL SYMPOSIUM

4. Vesico-Vaginal Fistulæ. Alice Conklin, M.D., Chicago.

Synopsis: Vesical fistulæ are of eight kinds; recto-vesical, vesico-vaginal, vesico-uterine, vesico-utero vaginal, vesico-ovarian, vesico-tubal, vesico-urinal, vesico-peritoneal. The causes are pessaries, syphilis, cancer, instruments during or following operations, alcoholism, sex, disproportion between pelvis and head in labor; use of forceps, deformed pelvis. The symptoms are: dysemia, cystitis, temperature or not according to the cause; escape of urine almost constantly, eczema. Patient becomes irritable, melancholy, constipated and anemic. Treatment: Operate as early as eight weeks after labor by either a vaginal denudation or vesical denudation with sutures or fill the gap in with uterus or use flaps from the continuous vaginal wall or any combination of the above methods.

5. Ovarian, Tubal and Tubo-Ovarian Hernias. Aimé Paul Heineck, M.D., Chicago.

Synopsis: Review of the English, French and German Literature that has been published on the subject during twenty years. These hernias have been noted at all periods of life; may be congenital or acquired, complete or incomplete, unilateral or bilateral, may or may not co-exist with hernias of a different type. Not infrequently other malformations of the internal or external genitalia are present or there may be noted absence of the uterus, of the vagina or of both. The uterine adnexæ may be the sole contents of the hernial sac. The condition of tubal, or ovarian, and of tubo-ovarian hernia in some cases has determined menstrual disturbance. Many of these patients have had repeated normal pregnancies and normal deliveries. The ectopic tube and the ectopic ovary are subject to the same disease as the normally located organ.

6. The Puerperium Treated as a Period of Prophylaxis against Subsequent Abdominal Pelvic Diseases. Carey Culbertson, M.D., Chicago.

(Synopsis not received.)

7. The Abuse of Local Treatment in Gynecology. Henry T. Byford, M.D., Chicago.

Synopsis: The abuse of the glycerin tampon—of ichthyol—of iodin applications of hot douche. The reason why patients are apparently benefited. What else can be done to keep the patients out of the hands of the Christian Scientist, Osteopath, etc.

Discussion opened by T. J. Watkins, M.D., Chicago; Franklin H. Martin, M.D., Chicago; H. C. Mitchell, M.D., Carbondale; O. B. Will, M.D., Peoria; Carl Beck, M.D., Chicago.

8. Intestinal Strangulation, with Case Reports. J. Estill Miller, M.D., Pittsfield.

Synopsis: Following remote injuries and inflammations. Importance of early diagnosis. Early operative interference, regardless of surroundings, to prevent grave toxemia. Remarks on treatment. Report of cases.

Discussion opened by J. H. Stealy, M.D., Freeport, Ill., and William M. Harsha, M.D., Chicago.

9. The "Health Conscience" and the Drink-Problem. Charles B. Johnson, M.D., Champaign.

Synopsis: In this country what has been aptly denominated the "Health Conscience" is of recent development. Those of us now in mature life recall a time when substantially all the people and a majority of medical men as well, were wholly indifferent regarding all that pertained to health conservation. But fortunately for humanity about a generation ago the first medical practice act was spread upon the Illinois statute books and following this was a gradual dissemination of a knowledge of contagion and the danger attending the spread of infectious disease. Recently competent investigators have become convinced that alcohol is responsible for as much morbidity and mortality as tuberculosis, perhaps more. If this fact be admitted is it not incumbent on the medical profession as a whole to lend its voice and influence towards curtailing the prevalence of alcoholism? That alcoholism is a disease, all admit. Then why should those whose duty it is to treat and prevent disease not deal precisely with alcoholism as they would with typhoid, tuberculosis or other preventable disease?

10. The Diagnosis of Acute Poliomyelitis. L. Harrison Mettler, M.D., Chicago.

Synopsis: New conception of the disease. Narrower etiologically, broader pathologically, and clinically. Its nosology. Certain and uncertain points in its diagnosis. Its typical symptomatology and variations. Importance of differential diagnosis. Treatment.

Discussion opened by Hugh T. Patrick, M.D., Chicago, and G. W. Hall, M.D., Chicago.

Special Order for 3 P. M.

KIDNEY SYMPOSIUM

Late Methods in Diagnosis of Kidney Diseases

11. Functional Diagnosis. Herman L. Kretschmer, M.D., and L. E. Schmidt, M.D., Chicago.

Synopsis: 1. General consideration of functional tests. 2. Need of a test that can be easily carried out and at the same time fulfill all requirements of accuracy. 3. The importance of estimating the renal function in surgery of the kidney. 4. Technic of the different tests. 5. Results of various groups of cases. 6. Deductions.

12. Some Insufficiently Appreciated Points in Urinary Diagnosis. Arthur R. Elliott, M.D., Chicago.

Synopsis: Clinical discussion on certain points in the interpretation of albumin in the urine and in the diagnosis of urinary tuberculosis.

13. Diagnosis and Treatment of Infections of the Renal Pelvis. L. W. Bremerman, M.D., Chicago.

Synopsis: This paper will deal particularly with the various methods of diagnosis of these conditions, will show clearly the various etiologic factors

involved, and will dwell principally upon the vaccine treatment and lavage of the renal pelvis.

14. The Value of Skiagraphy in Diagnosing Renal Disease, especially Renal Calculi, and the Importance of Radiographs Showing Lead Line Catheter *in Situ* for Differentiating Urethral Calculi from Phleboliths. P. S. O'Donnell, M.D., Chicago.

15. Eye Findings in Renal Diseases. C. E. McClelland, M.D., Decatur, Ill.

16. Unilateral Pyelo-Nephritis. E. Mammen, M.D., Bloomington, Ill.

Synopsis: The name does not describe a new disease, but is descriptive of a large class of cases. Early diagnosis difficult. Why? Symptoms. History important. Causation. Hematogenesis. From lymph channels. Various bacteria. Surgical treatment. Nephrotomy. Drainage. Nephrectomy.

Discussion opened by William E. Fuller, M.D., Chicago; D. N. Eisendrath, M.D., Chicago; A. C. Croftan, M.D., Chicago; Charles E. Paddock, M.D., Chicago.

17. Double Hernial Sacs. Dean D. Lewis, M.D., Chicago.

Synopsis: More than one sac in a hernia is rare. The occurrence of double sacs, but one of which is recognized at the operation, may account for some of the early recurrences noted after operation. Two cases are reported. In the first case a large indirect sac was associated with a small direct one which had dissected downward through the outer fibers of the conjoined tendon and appeared at the external ring. This sac rested upon the inner side of the indirect one. In the second case two sacs were found in a direct hernia. Both sacs were relatively large. The median was attached to the bladder. A strong Hesselbach ligament had apparently split a direct sac—originally single—and had resulted in the formation of two large ones.

Discussion opened by William E. Hessert, M.D., Chicago.

18. Intestinal Toxemia. Milton H. Mack, M.D., Chicago.

Synopsis: This paper is a consideration of autointoxication from the clinical standpoint only, considering those conditions in which autointoxication plays an important rôle as an etiologic factor such as neurasthenia, gastrointestinal disorders, headaches, disturbances of metabolism, etc., discussing the predominating symptoms found as a result of toxemia and giving methods of diagnosis and treatment and the results obtained in these cases.

Discussion opened by Everett G. Brown, M.D., Decatur.

19. The Surgeon and "Near Surgeon." J. W. Hamilton, M.D., Mt. Vernon, Ill.

Synopsis: The paper will be taken up along the line of the duties of a modern surgeon relative to investigating the patient's condition before the operation, his duty during operation and his duty after operation, setting forth the lack of skill and thoroughness in investigating previous and subsequent to an operation as being the cause of a high mortality rate in some men's work.

Discussion opened by Charles Davison, M.D., Chicago.

20. Vesical Calculus. Charles L. Patten, M.D., Springfield.

Synopsis: Report of a case. Review of Literature. Exhibition of specimen.

Discussion opened by Gustav Kolischer, M.D., Chicago.

21. The Clinical Determination and Significance of Some of the Peripheral Signs of Aortic Insufficiency. Frederick Tice, M.D., Chicago.

Synopsis: Importance of a careful examination of the peripheral vessels. Method of determining the more frequent signs. Frequency of occurrence and significance. Report of cases with clinical findings.

Discussion will be opened by Robert B. Preble, M.D., Chicago, and Bertram W. Sippy, M.D., Chicago.

22. Studies of Mixed Infection in Pulmonary Tuberculosis. Their Diagnosis and Treatment. Roswell T. Pettit, Ottawa, Ill.

Synopsis: The importance of mixed and secondary infections with pyogenic organisms in pulmonary tuberculosis is a question which has attracted the attention of students of tuberculosis for many years. Some observers believe the tubercle bacillus is responsible for all the pathologic conditions found in pulmonary tuberculosis, and that the mixed and secondary infections are of little importance, while others believe that the tubercle bacillus alone is comparatively harmless, and the secondary invaders are responsible for practically all the damage done. In repeating the work of various investigators by using a very careful technic of isolation and cultivation, and by taking a comparatively large quantity of blood, I have been able to isolate the streptococcus and pneumococcus from the blood in thirty-five cases out of 100 examined. These cases represented all stages of the disease, some with cavities and temperatures, others without. From this work I conclude that the pneumococcus and streptococcus are important factors in pulmonary tuberculosis. Autogenous vaccines have been made from the organisms isolated from the blood in twenty-two cases. The results of treatment with these vaccines are compared with cases treated with vaccines made from organisms isolated from the sputum, and both these groups are compared with cases not receiving vaccines at all. It has been found that autogenous vaccines appear to have a marked protective action against hemorrhage and the effect of vaccines on the temperature curve is also suggestive.

Discussion opened by Frank Billings, M.D., Chicago, and J. W. Pettit, M.D., Ottawa.

23. A New Theory as to the Mechanism of Skull Fractures, and an Analysis of One Thousand Cases. F. A. Besley, M.D., Chicago.

Synopsis: The presentation and analysis of one thousand cases of skull fracture. The discussion of a new theory as to the mechanism of skull fractures, based on the examination of heads at autopsies. The diagnosis, prognosis and treatment of skull fractures is considered from the viewpoint of an analysis of one thousand cases treated at the County Hospital.

Discussion opened by A. J. Ochsner, M.D., Chicago, D'Orsay Hecht, M.D., Chicago, and William E. Schroeder, M.D., Chicago.

24. The High Caloric Diet in Typhoid Fever. Joseph L. Miller, M.D., Chicago.

Synopsis: Objection urged against feeding in typhoid; danger of increasing the tendency to perforation and hemorrhage, and inability of febrile patients to assimilate food. Milk after reaching the stomach, in reality a solid food. Even solid foods in semi-liquid state in ileum. Power of febrile patient to assimilate good. Advantage of high caloric diet. Statistics show tendency to perforation and hemorrhage lessened, convalescence shortened. Type of diet used.

Discussion opened by Charles Elliott, M.D., and J. B. Herrick, M.D., Chicago.

25. Congenital Umbilical Hernia, with a Description of a New Operation. Frank A. Palmer, M.D., Morris, Ill.

Discussion opened by Alexander Hugh Ferguson, M.D., Chicago.

26. Surgical Significance of Rheumatism. Alexander C. Wiener, M.D., Chicago.

Discussion will be opened by John L. Porter, M.D., Chicago.

27. Arteriosclerosis. M. S. March, M.D., Peoria, Ill.

Synopsis: 1. Is arteriosclerosis increasing with the exciting manner of living and habits of the present generation? 2. Causes known to produce arteriosclerosis. 3. Are we deteriorating as a race by forming habits that produce arteriosclerosis? 4. Treatment.

Discussion opened by A. R. Edwards, M.D., Chicago; W. H. Gilmore, M.D., Mt. Vernon, Ill.

28. The Anesthetist as a Member of the Surgical Team. T. W. Gillespie, M.D., Peoria.

Synopsis: 1. Any anesthetic has its dangers, and the greater the amount used, the greater the danger; therefore, short operations and trained anesthetists are needed. 2. The anesthetist should have a general working knowledge of the technic of the particular surgeon with whom he is working. 3. The anesthetist should be a graduate of medicine, familiar with surgical conditions, and having a knowledge of sensitive and non-sensitive structures. 4. The anesthetist should follow each state of the operation as it proceeds, and vary the anesthetic accordingly.

Discussion will be opened by Arthur Dean Bevan, M.D., Chicago.

Special Order for 1:30 P. M.

ORATION IN SURGERY. John G. Clark, Philadelphia, Professor of Gynecology in the University of Pennsylvania. Subject: Uterine Hemorrhages, Diagnostic Aspects. Lantern Slide Demonstration.

Special Order for 2:30 P. M. General Public Admitted.

ORATION IN MEDICINE. Subject: Some Gifts of Medical Science to the World. William E. Quine, Professor of Medicine and Clinical Medicine, College of Physicians and Surgeons, Chicago.

PRESIDENT'S ADDRESS. A. C. Cotton, M.D., Chicago.

SYMPOSIUM ON CANCER (OPEN TO PUBLIC)

29. Cancer in Animals. Maximilian Herzog, M.D., Chicago. (Synopsis not received.)

30. Cause and Prevention of Cancer. F. R. Zeit, M.D., Chicago. (Synopsis not received.)

31. Early Diagnosis of Cancer. M. L. Harris, M.D., Chicago. (Synopsis not received.)

32. Surgical Treatment of Cancer. S. C. Stremmel, M.D., Macomb.

Synopsis: In view of the fact that in a paper like this it is impossible to do justice to the title, the paper will be limited to carcinoma of the breast with brief reference to carcinoma generally; and a plea for earlier operative treatment of neoplasms before it is possible to make a correct diagnosis.

33. Treatment Other Than Surgical. Arthur Dean Bevan, M.D., Chicago.

Synopsis: 1. Can cancer be cured? 2. What are the means which are now being advocated for the cure of cancer? 3. What results are being obtained by these methods? a. Removal with knife. b. Removal with cautery and caustics. c. Use of *x*-ray and radium. d. Serum and toxin treatments. Summary: Urging financial support, both state and private endowment for cancer research.

Discussion opened by J. B. Murphy, M.D., Chicago; J. F. Percy, M.D., Galesburg; H. M. Richter, M.D., Chicago; and William K. Newcomb, M.D., Champaign.

THE ORATOR IN SURGERY

JOHN GOODRICH CLARK, M.D., PROFESSOR OF GYNECOLOGY, UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA

John Goodrich Clark, M.D., was born in Wayne County, Ind., June 4, 1867. He was educated in public schools until 14 years of age, and then entered the preparatory department of Earlham College, Richmond, Ind., where he remained two years. He next matriculated in the Ohio Wes-

leyan University and became a member of the Beta Theta Pi fraternity. At the completion of his Sophomore year he joined a United States Civil Engineering party detailed for the survey of the Nez Perce Indian Reservation in northern Idaho. He later joined a party occupied in the survey of the Utah and Northern Railroad. At the completion of this survey he took up the study of medicine in the University of Pennsylvania and was graduated in the honor list in 1891.

Dr. Clark, who will deliver the oration in surgery this year on the subject "Uterine Hemorrhages, Diagnostic Aspects," entered in 1898 the Anatomical Laboratory of the University of Leipsic as a special student and began research work under Professors His and Spalteholz on the life history of the corpus luteum, and on the completion of this investigation he went to Prague, publishing two or three minor research papers from Professor Chiari's pathological laboratory in the University of Prague. On his return to the United States in 1900 he was elected professor of gynecology in the University of Pennsylvania. At present Dr. Clark is gynecologist-in-chief to the University Hospital and consultant gynecologist to the Woman's, Bryn Mawr, Germantown, Chestnut Hill, and other hospitals. He is a member of many professional organizations. He is vice-president of the American Gynecological Society and vice-president of the Clinical Congress of the Surgeons of North America. He is a member of the American Gynecological Society, American Medical Association, Southern Surgical and Gynecological Association, College of Physicians of Philadelphia, Philadelphia Obstetrical Society, Philadelphia Pathological Society, and consultant member of the American Clinical Surgical Society. As an author of medical topics, Dr. Clark is well known.

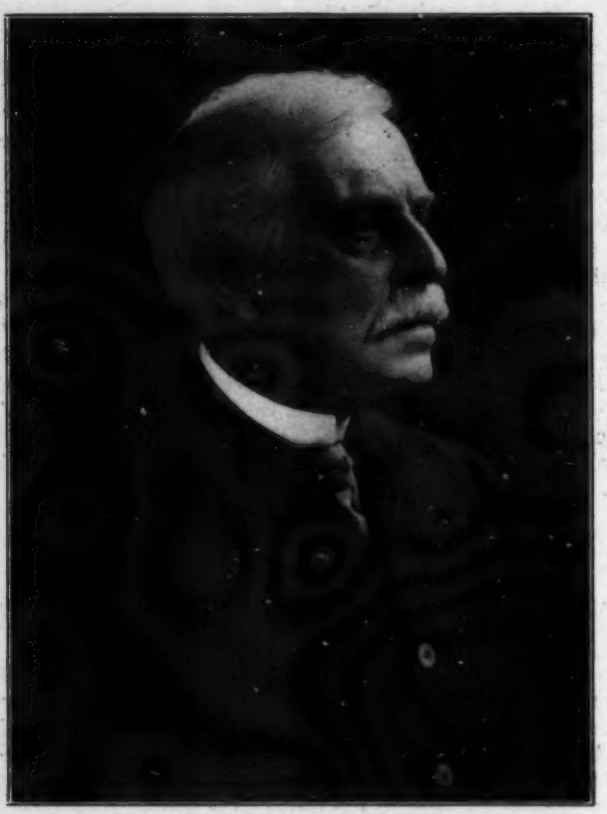
THE ORATOR IN MEDICINE

WILLIAM E. QUINE, M.D., LL.D., PROFESSOR OF MEDICINE AND CLINICAL MEDICINE, COLLEGE OF PHYSICIANS AND SURGEONS, CHICAGO

There are few men who have attained eminence in the medical profession at an earlier age than did Dr. William E. Quine. As a practitioner he has been at the head of his profession for more than thirty years and he still pursues his work with unabated vigor. As a teacher and exemplar his influence has extended to the ends of the earth. As a constructive force in the advancement of medical education he has had no superior in the west during the life of a generation.

He was born on the Isle of Man and with his parents came to this country when a child of 6 years. After graduating from the high school he took up the study of pharmacy and materia medica. This led to the study of medicine later and he graduated from the Chicago Medical College in 1869. On competitive examination he received appointment as an intern in the Cook County Hospital; and after the completion of his service he was made attending obstetrician and gynecologist to the hos-

pital. Soon after the attainment of his 22d year he was called to the chair of materia medica and therapeutics in his *alma mater*, where he taught with signal success until 1883. In that year he was elected to the chair of principles and practice of medicine and clinical medicine in the College of Physicians and Surgeons, where he has been the central figure until the present writing. He has been dean of the faculty for the past sixteen years and it was due largely to his influence that the



college was affiliated with the University of Illinois. He received the honorary degree of LL.D. from the University of Illinois in 1904. During the same year he was elected president of the Illinois State Medical Society. For several years he served as president of the State Board of Health.

In every position whether in private practice or public service he has conscientiously performed his duties "with unwearying patience and unswerving fidelity."

One of his greatest interests in life relates to medical teaching and I know of no one who has given more study to the art of imparting information to medical students. He has for nearly forty years ranked as one of the most eloquent and effective lecturers on medicine in this country. His students during all these years have had the most up-to-date instruction that could be gathered from the literature; and in addition have gained from him the highest ideals as to personal and professional honor, and a proper direction of aim and endeavor.

He has written little. His message has gone home to the medical student. The impress of his personality on his pupils, his colleagues and the institution with which he is connected has accomplished more than could scores of volumes. As a notable illustration of the influence of a strong personality, one of his beloved colleagues has cited the case of Socrates who, "without leaving a line of his own writing, exerted through his disciples an influence on civilization that will last as long as culture." Dr. Quine is an idealist. His last official act, up to this writing, the establishment of a department of instruction in "social service" in the regular curriculum of his college, is characteristic.

EXHIBITORS AT AURORA

SPACES.

1-2. V. Mueller & Co., Chicago, makers of surgeons' instruments, invalid chairs, abdominal supports, surgical dressings, microscopes, etc.
3 Eskay's Food.
4. Victor Electric Company.
5-6. Borden's Condensed Milk Company.
7-8. Sharp & Smith, makers and importers of surgical and veterinary instruments, hospital supplies, elastic stockings and supporters, artificial limbs, trusses, etc.
14. Horlick's Malted Milk.
15-16. The Abbott Alkaloidal Company, importers of fine chemicals and chemical specialties.
18. Mellin's Food Company.
19. Armour & Company.
20. International Corset Company.
21. Henry K. Wampole & Company, manufacturing pharmacists.
22. The Maltine Company.
23. Chicago Medical Book Company.
25. Physicians' Record Company.
26. Burroughs-Wellcome Company.
28. G. D. Searle & Company, pharmaceutical chemists.
29. D. Appleton & Company.
30. Wm. Meyer Company, electrical apparatus, etc.

COUNTY AND DISTRICT SOCIETIES

ADAMS COUNTY

The Adams County Medical Society met Feb. 13, 1911, at the Chamber of Commerce Rooms, Quincy, with President Knox in the chair.

Those present were: Drs. Knox, Ball, Center, Nickerson, Wells, Kirk Shawgo, Austin, Koch, Gilliland, Pfeiffer, Christie, Brenner, Mitchell, Beirne, Rice, Ericson, Millen, Werner, Bloomer, Green, A. D. Bates, Schullian and Stine.

The principal discussion of the business meeting was the optometry bill. A motion prevailed that the legislative committee of the Adams County Medical Society act in behalf of the society in opposing this bill.

The scientific program was both interesting and instructive. It consisted in a short clinic and several well prepared papers. Two cases of persistent foramen ovale were shown by Dr. John A. Koch, one patient being a little boy and the other a young man. The first paper was a "Clinical Report of a Case of Hydatidiform Mole, with Exhibition of Specimen," by Dr. F. L. Brenner. This was extremely interesting both on account of its rarity and the beauty of the specimen.

Dr. John A. Koch, who has recently returned from Europe, gave a detailed explanation of "Salvarsan in the Treatment of Syphilis." Dr. R. J. Christie told us about "The Use of Moorhoff's Paste in the Treatment of Bone Cavities." This excellent paper concluded the program and on motion the meeting adjourned.

COOK COUNTY

CHICAGO MEDICAL SOCIETY AND CHICAGO UROLOGICAL SOCIETY

Joint Meeting, Feb. 8, 1911

The meeting was called to order by Dr. Robert H. Herbst, president of the Urological Society. Dr. W. T. Belfield read a paper on "Non-Operative Treatment of Bladder Tumors and Prostatic Enlargement." Drs. G. Kolischer and H. Kraus presented the subject, "Complete Suture of the Bladder." Drs. L. E. Schmidt and H. L. Kretschmer, the subject, "Topography of the Normal and Pathologic Ureter as Determined by the Shadowgraph Catheter." Dr. D. N. Eisendrath demonstrated with the stereopticon "The Interpretation of Kidney and Ureter Radiographs."

DISCUSSION ON THE PAPER OF DR. BELFIELD

Dr. G. Kolischer: I think Dr. Belfield in his remarks opened the discussion upon a very burning and important question of the day. I doubt if I can add much to what he has said, although I would like to add a few little amendments to what he has said as to the operative treatment and its results in bladder tumors.

When sizing up the possibilities of permanent results it is hard to throw together the results of former years and those of the present time. It is true that the statistics of former years were poor, but we must remember that they were gathered years and years ago. Just let me give you a little comparison; up to about fifteen years ago operations on one of the organs most often involved in carcinoma (the uterus) gave but 5 per cent. favorable results. That continued until Ries devised his method. Since this method has been in use the favorable percentage jumped to 20, later to 40 and some now claim as high as 50 and 60 per cent. cures.

The same holds true in bladder tumors. You must remember that a few years ago the cutting operations were the most irrational ever performed. That has changed somewhat and the results will change in proportion as we live up to the demands of rational operation.

It is true, as he says, that no pathologist has seen tumor of the bladder disappear spontaneously. One of the men having the widest experience in these cases, Dittle, claims but three times in his practice to have seen them disappear spontaneously in cases where he had declined to operate.

At the same time you must remember that there are inflammatory infiltrations, that cause similar symptoms. In abdominal surgery we open the abdomen with the thought of extirpation of the tumor if possible. If it is deemed impossible, or impractical the abdomen is closed up and sometimes the patient lives for years and years.

The only man of later years who could command a large number of tests because of the wealth of material which came to him was Nitze. He claims, as Dr. Belfield stated, that he had had more cures by the use of galvanocaustic snare through the operative cystoscope in intervesical operations than by any other method. There is not the slightest occasion to doubt this statement because his findings were published by his assistants after his death. I may say advisedly that no other man had the experience he had.

In some inoperable malignant tumors of the bladder we relieve the patient's suffering by cauterizing the exulcerated, bleeding surface of the tumor. Taking this into consideration and the excellent results that were obtained by endovesical operations in benign tumors, we certainly must look favorably on Dr. Belfield's proposition. But, in whatever way we use high frequency currents, one must always keep in mind that we are not employing any method of a selective quality, but that we are simply using an actual cautery, that we are burning down tissue, which method in the cases mentioned by Belfield will certainly furnish results.

Dr. Emil Ries: Dr. Belfield's statements will hold true if we make the preliminary jumble of benign and malignant tumors that he has made. The benign, pedunculated tumor may fall off and float off and the patient may be reported as cured, but to believe that malignant tumors will be cured in the same way is a slap in the face of every law known to pathology.

The fact that operative treatment of tumors of the bladder has not been satisfactory does not prove that there is no difference between benign and malignant tumors. If you take your tumor to the youngest interne at the hospital (because no one who really knows, has time to make the examination) and he gives you a diagnosis upon which you cannot rely, then do not blame your tumor! There is just as much difference between these tumors of the bladder as there is between a wart on the nose and a carcinoma. There is nothing remarkable about destroying a wart by any kind of local treatment, knife, scissors, high-frequency or any kind of cauterizing treatment; but if any one comes and tells you that he has *cured* a malignant tumor of the bladder by high-frequency and has never taken off a piece of that tumor for examination beforehand, then I say that the results and conclusions are up in the air. You have relieved your patient of something (perhaps something that looked like a tumor) but you cannot say what it was.

If you wish to prove scientifically and conclusively that you have cured a malignant tumor you must first know positively that it is one. If you see a papilloma in the bladder and do not take it out and do not put it under the microscope, and by your treatment you cure it, you do not know what you have cured and I modestly assert that your results are inconclusive. First you must know what you are dealing with, then you can say what is the outcome. If you do not then I do not see how you can say anything very positive. You can say that your patient was cured of something that *looked like* papilloma, or something else, but that is not scientific investigation.

As to the application of high-frequency currents to tumors: I have nothing to say except that it is apparently excellent, simple, effectual and satisfactory in certain cases.

I wish to say a few words as to spontaneous disappearance of malignant tumor. That story appears quite frequently of late. I wish you had all read

a paper by Richardson read at St. Louis and published in the *Journal of the American Medical Association* a few weeks ago, in which he told of an extraordinary experience in a case which I will review briefly because it fits in exactly with what Dr. Belfield said about disappearance of tumor of the bladder. A woman was sent to Dr. Richardson for an examination. After making a diagnosis of a very malignant tumor, he advised her physician to have the woman operated on by a good man in the most radical way possible. Dr. Richardson said, frankly, that in spite of the operation which he was advising he could see no hope for anything but prompt recurrence and death. Well, the woman was operated on and on examination of the specimen the tumor proved to be nothing but a plain benign adenofibroma with a cyst in the center. This teaches us humility in our clinical diagnosis. If that breast had not been operated on, the tumor might have become smaller again and there would have been a case of spontaneous cure of cancer. That is the kind of tumor that disappears. Where are the true, malignant tumors that have been investigated microscopically by reliable men that have disappeared under any other treatment than operation?

The surgery of bladder tumors is in its infancy (I am speaking now of the malignant). Most operators are satisfied if they extirpate a piece of bladder wall and think they have it all. Does that correspond to what we have found to be good surgery in other parts of the body? No one thinks of calling it a complete operation if he merely takes away a piece of a carcinoma of the uterus. It is not enough to remove merely the primary seat. You must remove it all. Who has done that in tumor of the bladder? No one.

Dr. A. H. Ferguson: I had not intended to enter into this discussion, but being called upon and having had some little experience, I cannot refrain, and the presence of our essayist of the evening, who is one of the pioneers in prostatic work of the world further impels me to do so. I shall pass over the discussion of the bladder, although I have some ideas of my own in regard to it, and will devote the few moments I have to the prostate.

We have here with us Dr. Belfield, who was the first man to suprapubically attack hypertrophy of the prostate—that great bug-bear of the man over fifty. I am not sure (were he not so modest) but that he could lay claim to all the suprapubic work that had been later brought out by McGill and Freyer.

Here to-night, after a most ripe experience, Dr. Belfield comes forward and proposes certain procedures which will stay the knife in certain cases and conditions. He says that the high frequency current will contract and shrivel up prostatic hypertrophy.

The last few years, as the treatment of prostatic hypertrophy has developed in my hands (and at the hands of others as I find it in the literature of the day) I am convinced that a large number of cases have gone on record as complete cures from complete prostatectomy when probably this treatment of Dr. Belfield's, or simply the removal of the pathologic lobe, would have been sufficient.

He mentioned to us how Young of Baltimore turns the instrument, grasps the middle lobe and removes it. Before I read of that I used a nasal snare and removed the middle lobe with it through the perineum. So in all of these cases there is a period in the development where the condition may be effectually treated. Remove it if necessary, but if not necessary, then treat it according to the method advanced by Dr. Belfield and a great many men will be saved from the knife.

William T. Belfield (closing the discussion): Dr. Ferguson gave you the impression that I was the first to remove the enlarged prostate, which of course he did not intend to do.

Now as to the treatment of vesical tumor: it seems from what all three of the gentlemen said that my estimate of the poor success in the treatment of this condition by the knife has been correct up to date, but that in the future it is going to make a better record. I surely hope it will, but we have to take what has been and is, rather than what we hope will be, as a basis for our comparison.

I did not quote any statistics. I did quote the very recent utterances of a man whom we all know, Casper of Berlin and also those of Albarran in Paris, to the effect that "the knife was an exceedingly unsatisfactory instrument."

That the operative treatment will improve we all hope. It would be strange if it did not, but it is a sad fact, that the more extensive the operation becomes, the more extensive the fatal results, and we should not limit our attention to those who survive and forget those who do not. I think we shall have to admit that with our present knowledge we have nothing to be satisfied with.

There was some confusion, apparently, in Dr. Ries' remarks that this current had been successfully used in treatment of malignant tumors. So far as I know there has been no success in treatment of malignant tumors and I should be very much surprised if there should ever be a cure by it because, as Dr. Kolischer said, Nitze, with his marvelous experience and wonderful skill backed out of the malignant tumors and could not cure them with his method. Now the only difference between this and the Nitze method is that this can be used by anyone, while Nitze's can be used only by the trained and skillful. Nitze had the greatest skill that has yet been shown and his experience covered some four hundred cases and he limited his cauterizing operation to one hundred and fifty, showing that they were selected.

Suppose this will do with the ordinary man what cauterizing did in the hands of Nitze! The fact of the matter is the knife kills one out of every six or seven with benign tumor. This has not killed anyone yet and I do not see how it could. This alone would settle the matter so far as that is concerned.

Dr. Ries said he is still a believer in the microscopic diagnosis of malignant tumor. What I doubt is the microscopic examination of benign, as we pull them off or snip off a piece. A microscopic examination for benignancy of such tissue is not very satisfactory.

I should like to say, as I said before, that all I wish to accomplish by trespassing on your patience is to insist that, up to date, the knife treatment of vesical tumor is most discouraging and that in this simple contrivance we have the promise (we cannot have more at present) of accomplishing all that the knife will accomplish in benign tumors of the bladder without as high a mortality and without the distressing ordeal of an operation.

I have found that the way to get a very definite and practical answer to these points from doctors is to ask them whether, if they had a tumor of the bladder which seemed to be benign, if they would, in the light of present-day knowledge (even the latest knowledge) endure the knife treatment. Would you submit to the knife? or would you use this? I do not think we would need to argue half an hour to find out.

DISCUSSION ON THE PAPER OF DRS. KOLISCHER AND KRAUS

Dr. F. A. Leusman: While I highly appreciate the honor of being called on to participate in this discussion, I must admit that I came here unprepared, not expecting this emergency.

I wish to select from my operative experience for illustration three cases of prostatic hypertrophy sent to me from the country within two months for operation. All were old men ranging from 64 to 81 years. All three were in equally low condition due to a cystitis with general sepsis and autotoxemia. There was some temperature and mental clouding. The trip to the city had nearly given them the finishing touches.

In two of the cases, following the advice given by those who have had sufficient experience, I made a previous cystotomy and removed the prostate two weeks later. They are alive and well. In the third case, coming in soon after in a like condition, I did not resist the temptation of quick work and did in one sitting what I wisely divided into two acts in the previous cases. Result, death four hours after the operation. I am sure the two tempo operation would have saved this case also.

Of course in the absence of sepsis the two tempo operation is not required. I follow the custom of all operators known to me, and drain all my cases after

a prostatectomy. I do not believe that Dr. Kolischer intended to convey the impression that we were to leave no drainage after prostatectomy. I have no doubt that such may be done at times with impunity and great comfort to the patient; the question remains: is immediate vesical suture safe as a routine procedure? Is it as safe as temporary drainage even in selected cases? Time and the experience of many, not a few isolated cases, will answer.

Dr. A. Goldspohn: The only thing I have to add is in regard to technic. I think Dr. Kolischer simply omitted to state the importance in doing vesicovaginal fistula operations of turning in the mucosa and uniting it, so as to bring its raw edges more extensively in apposition; and then uniting the everted edges of the muscular and connective tissue layer of the bladder wall, by a separate tier of sutures that bring its raw surfaces also more extensively in contact.

Dr. Emil Ries: It is hard to see that it is anything very peculiar that we should get good results by uniting raw surfaces in suturing the bladder. We suture fascia and bring raw surfaces together and they heal and we suture the tendons and bring them together and they heal. Why was there this constant difficulty with the suturing of the bladder wall itself?

I think one reason is because the surgeons have been afraid to sufficiently detach the bladder all around. They have made small incisions to get into the suprapubic space and the bladder could not come together easily.

Here, again, as Dr. Kolischer said, the bladder surgeons might have learned from the gynecologist. Usually the small vesical fistulas healed nicely, but where the holes in the bladder were large, they always presented great difficulty because the parts would not come together, because they always were attached to some cicatricial tissue. Now we detach the bladder so that it falls together like an empty sack. Then there is no difficulty in bringing together the edges of the largest fistulas. Dr. Kolischer's method of suturing is something new to me. In order to make the bladder fall together he mobilizes the edges in a peculiar way. The way he does is to cut the muscularis from the mucosa, then it is no longer attached to the other tissue and will fall inwards. This can be done in another way by passing the finger around and detaching the bladder all around. Then it will also become free and fall together.

I have not tried the method which Dr. Kolischer suggests because, as I said, it is new to me, but I think it is good and should be tried.

Dr. Kolischer (closing his discussion): I only want to rectify a few points in which Dr. Leusman misquoted me. I did not advocate complete suturing of the bladder after prostatectomy, but I suggested that if an operator should close up the bladder completely after prostatectomy he should proceed along the lines discussed in my paper. Dr. E. Wyllys Andrews recently closed up the bladder entirely after a smooth suprapubic prostatectomy, but left muscle wound and skin incision open for 48 hours and then closed up by secondary sutures with good result.

I did not go into the details of the flaps operation for vesicovaginal fistulas, because that does not belong into my paper. If we have to deal with a loss of substance, that is one thing, and if we have to deal with the closing of a straight incision, that is another proposition.

The point that Dr. Ries took is an important one. For years I am advocating the shelling out and mobilizing of the bladder in all suprapubic work. So far as the folding in of the mucosa is concerned, that is not original with me; this idea is a French one.

The main point that I wanted to make and that I want to reemphasize is, that the dangers of infection jeopardizing good results lies not in the bladder proper, but in the structures above the vesica.

DISCUSSION ON THE PAPER OF DRS. L. E. SCHMIDT AND H. L. KRETSCHMER

Dr. A. H. Ferguson: I highly appreciate this paper. Several years ago a patient was brought to me with x-ray pictures showing stone in the ureter on both sides. We opened both sides and found no stone. If we had at our disposal a diagnostic procedure such as this all that would have been avoided.

In another case seven different shadowgraphs were taken and no stone demonstrated. We operated upon the left kidney and removed a stone!

Dr. Max Reichmann: Dr. Kretschmer asserts that the insertion of the shadowgraph-lead was to determine whether it is kidney or not. In two cases (one sent to me by Dr. Schmidt himself) a distinct shadow was found in the region of the kidney. After operation we found no stone. We found, instead, a calcified tuberculous mass.

As far as shadows are concerned, we must not forget that we often find these shadows very close to the shadowgraph catheter and still they are not stones and may lie anywhere in the pelvis. The only method, to my mind, to determine if these shadows are in the ureter or not is by inserting shadowgraph catheters and making pictures, then we see their position and can determine their nature. We can use intensified screens which allow us to make pictures in one-twentieth the time we could before so that we can even have the patient hold his breath, which will do away with the double shadows which are sometimes misleading and confusing to say the least.

Dr. Kolischer: There are two points on which I particularly want to take issue with Dr. Kretschmer. The first one is this: the doctor showed us a picture in which the shadow of the sound appears running from the bladder to the kidney in a tortuous way forming several spirals; he explained this phenomenon by telling us that the introduced wire forced the ureter into this meandering formation. I do not think that this theory could be satisfactory to anyone familiar with the subject. While it is true that the ureter is somewhat longer than the straight line from vesical end of the ureter to its junction with the kidney, observation of the picture will prove that if actually the ureter should go through all these windings it would necessitate that the ureter should be stretched to at least double its length. Such a dislocation of the entire course of the ureter would also necessitate a separation of the ureter from all the tissues surrounding it. I cannot persuade myself to believe that such a forceful action could be accomplished with such a pliable sound as a fuse wire is. It would also be in contrast to the results of the experiments that Dr. Schmidt and I conducted, when we devised and developed the use of the shadowgraph sound some ten years ago.

I think the explanation of this spiral shadow has to be looked for in another direction. If a wire is introduced into a ureter that is considerably dilated, then it will, so to speak, crawl upward by finding its way alongside the wall of the ureter, thus forming a spiral. This can be proven by the crossing of the windings in the picture and by a subsequent test. If such conditions exist and a fluid that is not penetrated by the *x*-rays is injected into such an ureter, a wide shadow will appear on the *x*-ray plate, thus illustrating the dilatation of the ureter, and the shadow will correspond in its width with the proportions of the spiral (here Dr. Kolischer went to the blackboard demonstrating by drawings what he intended to convey).

The next point I want to take exception to is this: The doctor mentioned that in one instance he tried once to pass a catheter into an ureter and did not succeed. At a next seance he introduced a wire and was able to pass it, consequently he gives us the diagnosis of a stricture of the ureter. I do not think that his argument is absolutely convincing. Existence of ureteral strictures can only be proved by more elaborate diagnostic procedures, such as numerous attempts at catheterization, use of an olive tipped sound, or a balloon catheter, instillation of adrenalin solution; or proof of a dilatation of the ureter above the suspected point. To diagnose a stricture of a ureter because one attempt at catheterization failed and a next attempt was successful may be misleading.

Dr. L. E. Schmidt (closing the discussion): These things were not forgotten. This paper did not pretend to go into them to any extent. We thought that in a paper of this kind it would be enough to make the statement that we attempted several times to catheterize this patient. We were unable to pass anything larger than a No. 4 French catheter. We tried to pass a larger one

fully ten times and were not able to do so, but we were able to pass a No. 3 or No. 4 French at every sitting. There was, therefore, no hesitancy in my mind in saying that there was an obstruction.

We have been doing a great deal of work with collargol and cargentas and they were used in this case, and then the diagnosis was made. But this is not always necessary. If you repeatedly catheterize an ureter and meet with obstruction every time, I am certain that there is some organic obstruction present. If you pass a 3 or 4 and cannot pass anything larger, then you have an obstruction.

Every living abdomen carries a certain amount of enteroptosis. I am convinced that if you have rapid loss of weight in a man who has been fat—loss of peritoneal tissue—you will have more.

So far as Dr. Reichmann's remarks are concerned I do not agree with him. I will admit you can see one or two outlines if you take but one place into consideration, but if you will note on these pictures there is complete variation up to the kidneys. If this was due simply to abdominal breathing I do not believe that the entire course of the ureter would show it.

As to diagnosing the phleboliths I will say that, as Dr. Reichmann says, with these pictures you can probably form more correct conclusions, but you can get at the same thing by placing the patient in different positions and say more positively whether it is stone or not. If the shadow appears back of the lead bougie you cannot say it is behind the ureter. If it is not directly in line with the lead bougie when the patient sits up there is a distance that can be demonstrated. Cabot of Boston has demonstrated this where the stone is apparently over the sacroiliac joint. Place the patient upright and put the tube at an angle; then from the difference in position of the shadow conclusions can be drawn as to its location.

So far as the first set, or pictures of normal cases, is concerned, I do not believe any work was done heretofore in connection with lead bougies and I believe there have been certain factors elucidated. There is a great difference in the normal course of the ureter. So far as the pathologic features are concerned I think there has not been anything new brought out. The pathologic pictures did not show up as well as was expected. They have been recently made and we had no opportunity to select the best ones.

CHICAGO MEDICAL SOCIETY

Regular Meeting, Feb. 15, 1911

The meeting was called to order by the president, Dr. Alex. H. Ferguson. On account of the absence of Dr. J. R. Fletcher, his paper on "The Stipula Nystagmus from a Broad Standpoint," was not read. Hermann Hille, Ph.D., addressed the society on "The New Chemistry in Medicine," demonstrating the subject by an exhibit of the results of his researches. During the presentation of the address the president was called away and appointed Dr. Emil Ries chairman pro tempore. Dr. G. Frank Lydston then read a paper on "Are Reforms Necessary in the American Medical Association and Its Constituent Bodies?"

Dr. Lydston's paper appears on page 603 and the discussion follows the paper.

Regular Meeting, Feb. 22, 1911

The meeting was called to order by Dr. Carl Wagner in the absence of the president. Dr. Isabella C. Herb read a paper on "Administration of General Anesthetics with Special Reference to Ether and Chloroform." Dr. Carey Culbertson read a paper on "Subinvolution of the Abdominal Wall." The paper of Dr. Wm. H. Wilder on "Metastatic Ophthalmia," was postponed for another meeting owing to the lateness of the hour.

Prof. J. J. O'Brien of Boston then gave an exhibition of Jiu-Jitsu.

DISCUSSION ON THE PAPER OF DR. HERB

Dr. A. J. Ochsner: The subject of anesthesia has been an interesting one to me for a long time. My especial study of anesthesia was the result of an

experience I had when I was an assistant of Dr. Parkes. We had a death in a child aged 12 or 13 years, from whose face a small mole was being removed, and as a result of that experience I initiated a system of observation of anesthesia which I have carried on ever since.

Each case is recorded and all of the facts noted on these report sheets (exhibits passed) are observed, so that we have, during the past 21 years in my clinic, observed carefully over 30,000 cases (the exact number to date being 30,674) of general anesthesia.

The first result of this work has already been described. Dr. Prince was the first one who took up this work in my clinic and as a result of his observations he introduced the drop method of giving ether. That is the method we have used almost continuously. For a time we anesthetised the patients with chloroform first and then continued with ether. Then we took up various methods. We investigated a method introduced by Dr. Henry of Omaha with ether, alcohol and benzine. Then for quite a long series we took up nitrous oxid gas and ether and for a few cases scopolamin and morphin, and spinal anesthesia in a few.

Invariably, after trying these methods lauded by this one or that one, we came back to the plain ether anesthesia. In the number of cases reported we have had two deaths, one in a case of extreme cigarette heart during an operation for hemorrhoids and the other in a very severe case of carcinoma of the uterus with small metastatic carcinomatous nodules of almost all of the other organs.

I believe at the present time the method introduced by Dr. Prince—the ether method which Dr. Herb has just described to us—is by far the best method we have. It is a safe method, if it is given for a reasonable period; that is, if the operation is performed with reasonable speed so that the patient is not exposed to the ether for too long a time there is not much danger from pneumonia.

In regard to preliminary drugs: I had an experience with this also while I was with Dr. Parkes. Professor Nancrede visited our clinic for a week and just before going away he said he was amazed at the comfort with which our patients took ether, and at the absence of vomiting and he asked Dr. Parkes to what he attributed it. Dr. Parkes said it was because for years we had been giving a quarter of a grain of morphin and one one-hundredth grain of atropin as a preliminary preparation half an hour before the operation.

This explanation was accepted but the head nurse came around to me and asked me to tell her what Dr. Parkes had said. I did so and she said she had never given it, because the nurse whose place she took had not told her to do so. She had been there about a year at that time. That is just about as accurate as we are in most of our ideas about anesthetics. As long as we have an enthusiast for an anesthetist all goes well, it makes little difference what method we use.

In my own observations, I have found that we rarely have any annoyance during the giving of an anesthetic simply because we employ this one little principle, we have a person who is enthusiastic over the method of administration and all those who give it do so under his direct supervision.

At the present time, however, we do give morphin and atropin in one class of cases, namely, in case of goiter operations, half an hour before we begin to operate we give one-fourth of a grain of morphin and one one-hundredth of atropin. Just before operating we place the patient at an angle of 45° with the head elevated so as to reduce the amount of blood in the upper part of the body and the operation is done without further anesthetizing. By this procedure mucus does not appear. In these cases you cannot have the mucus expelled from the mouth because you do not want it near the wound.

The point made by Dr. Herb of placing the head on the side is very good. Dr. Fowler invented an ether mask that could only be used when the patient's head was on the side and he compelled his anesthetists to use it. Dr. Ferguson of New York has a method of placing a strand of gauze between the cheek and the teeth and it has the same effect of draining the mouth.

In cases in which we have a choice of time for operation we give two ounces of castor oil the day before and then give liquids only until the time for opera-

tion, then give the ether by this method which has been described and there is very little vomiting.

For a time Dr. Prince thought that pressing under the clavicle he could press upon the phrenic nerve and the patient would not vomit. I think more probably, perhaps, his attention being more closely upon the anesthetic, he gave it more carefully.

As regards the selection of an anesthetic: I think if you always select ether you will make no mistake.

Dr. A. D. Bevan: Just one thing about the apparatus which Dr. Herb has spoken of in her paper. Dr. Reginald Jackson was in my clinic at one time and he found the internes struggling with a patient. He said "I will send you down something that will help you with your patients," and he sent down these. Since that time I have used a great many of them.

It is, as you see, a pair of handcuffs with a strap between. When the patient lies down the hands are at the side and the strap under him. There is no pressure upon the muscles and the hands are in a comfortable position. Then, with a broad strap above the knees anyone with very little power can control the strongest individual. They are really worth a great deal.

The catch is very simple and can usually be undone very quickly if there is occasion for artificial respiration. It is an important addition to the equipment of any clinic.

I wish to compliment Dr. Herb upon her work in giving anesthetics. I have been fortunate enough to observe her work for a number of years. She has had charge of our work at the Rush clinic and has had charge of the instruction of the senior students. I am quite a convert to the giving of anesthetics by an expert. I say "convert" because I used to take a different view of the subject. I used to think it could be given by any hospital interne or the nurse. As a matter of fact, the internes will receive much better instruction if there is a professional anesthetist in the hospital and while the internes are giving the anesthetics, they will do so under proper instruction and they will learn very much better.

I think probably the best anesthetists are women physicians. I think they do far better than the trained nurses. There is some question about turning this work over to the nurses. I received a letter from a man in Ohio who is much interested in the elevation of the standard of education and is much exercised about the possibility of having this important work turned over to individuals who are not medically trained. I do not take quite the same view he does, but in England the matter has gone so far that they have not only taken the giving of anesthetics out of the hands of any but the medical profession, but they are trying to take it out of the hands of dentists.

One might say that if nurses were well trained they would answer the purpose. I think that is true, in a certain sense, because where they are well trained and have received special instruction they can do good work, but on the whole I believe it is a far better field for the woman who goes into medicine and I should like to see this work well compensated. It is important and would be made attractive.

I want to say one word about professional anesthetists as a class: there is a tendency among some anesthetists to earn their fee in some cases, and to make it seem a very complicated procedure. You all know of some of the complicated apparatus on the market. I have seen one start in with a little nitrous oxid gas, then give a little ether, then a little more nitrous oxid gas and then some chloroform and so on and before he got through he had given half a dozen different percentages to the patient and made a great impression upon the medical attendants and upon the family who hired him. Simplicity, after all, is nearest the truth. If you will experiment with nitrous oxid gas and oxygen and then later add ether or chloroform you will only succeed in complicating matters. I would not give a picayune for such complicated apparatus for the purpose of giving certain percentages of this, that and the other thing.

Most of you have heard me talk nitrous oxid gas and I still believe it has a definite place, but I must say that since Dr. Herb has had charge of our work we are using it less and less. We have given up the sequence almost entirely and I believe there is a danger period which is sometimes of importance. That is the period when the patient goes out from the nitrous oxid gas and is crowded with ether. That is sometimes a period of serious moment to the patient. Possibly there may sometimes be a period for its use, but if ether is given properly the cases where it is indicated will be few. There is a tendency to use nitrous oxid gas and oxygen, or scopolamin-morphin and oxygen. There may be some cases where this is good, but it certainly does not compare with the use of ether by the drop method properly employed and I should like to emphasize the fact that these complicated methods of anesthesia will not compare in large series of cases with the simpler methods.

I quite agree with what Dr. Herb has said of the benefit of ether over chloroform. I received a letter from a man in Minnesota who said he had operated on a patient recently and had a typical case of chloroform poisoning. It is far more dangerous than ether and should be used in a limited number of cases.

So far as spinal anesthesia is concerned: I think that the fiasco of Jonnesco, followed by the deaths at the Cook County Hospital, was about enough to make us here at any rate quite positive in our opinion. There are certain cases where all of the evidence is properly weighed that spinal anesthesia is probably the better method.

I should like to say this for nitrous oxid gas: it has a definite field. I think in every clinic and the surgery of the general practitioner there should be a nitrous-oxid-gas apparatus. There is nothing better in the minor operations—lancing a felon or an abscess and operations of that character; in operations about the urinary tract with kidney insufficiency, enterostomy, colostomy, perforations in typhoid, cases where the patient is in such a condition that the least stretch will break the chain between life and death.

I should like to see the time when every hospital will see the necessity of employing a professional anesthetist and the time when the professional anesthetist is recognized as one of the essential parts of the surgical machine without which the best modern surgery cannot be accomplished.

Dr. Blech: This is a subject of great importance to every surgeon who is compelled to work with a non-specialist personnel. I think I am safe in asserting that the trouble seems to be in a failure to appreciate the difference between full surgical anesthesia and narcosis, which is ideal when resembling as much as possible natural sleep.

We all have had our experience with anesthesia, sad and good. I can conceive of nothing more shocking than sudden death from the anesthetic, long before the operator has had a chance to begin his work. This has happened invariably after chloroform anesthesia and, as a rule, after the administration of the first five or six drops. Years ago I used to employ chloroform anesthesia. My assistants were familiar with the niceties of technic and I felt safe as long as I knew that they watched every pulse beat and respiration. Then all at once I had two cases which nearly terminated fatally. This convinced me that chloroform is safe only when let alone.

The Germans have worked out the technic of the so-called ether open drop method to such a nicety that I feel safe under even trying circumstances. Formerly every operation was dreaded by me, now I enter my work with the assurance that nothing serious can happen from the narcosis.

I have had one death from nitrous oxid anesthesia. This was in a strange hospital. The man died while I was finishing the toilet of my hands. It was a case of anuria due to impacted calculi. There may have been a cardiac complication and I am not competent to pass an opinion on this method of anesthesia.

The principal thing to teach the personnel entrusted with ether narcosis is to instruct the patient to inhale and exhale deeply on command before the patient is anesthetized, irrespective whether morphin and atropin is given before operation or not.

The ether, which had best be warmed, is dropped on the Esmarch mask from the height of about a foot. This breaks up each drop and allows dilution with air. The rate should be about 120 the minute. Gradually the head is brought over the edge of the table and reclined up to an angle of 90 degrees, that is to say until the face forms a vertical line at right angle to the floor. In this position aspiration of mucus is impossible, the secretions are enabled to flow outward without a struggle and narcosis is quiet. Chloroform is given in ten to twenty drops on the same mask after the patient has shown intolerance for ether and then ether is resumed. The stimulating effect of the ether on the heart counteracts the depressing effects of the chloroform.

In a well conducted anesthesia the anesthetic can be stopped immediately after closure of the peritoneum in laparotomies and before the dressings are applied the patient is practically awake. This is the right moment to command the patient to resume his breathing exercises and thus rid the system of much ether. In threatened hypostasis the patient is made to sit up immediately after the operation and I think it a good rule to begin with this posture very early to insure a speedy recovery.

Dr. Edwin Pynchon: I have been very much interested in both the paper and the discussion, the moral given being that a special anesthetist should be employed in each hospital. I think this is extremely desirable. From my experience in going from hospital to hospital I find that I am usually served by the youngest interne, and as the internes change very frequently, I rarely ever have the same one twice.

In my line of work I use general anesthesia principally for the removal of tonsils and adenoids and in such cases ether is preferable to chloroform, particularly in young children. The usual custom is to get the patient well under with the mask when the operator works until the patient begins to come to, and then the mask is employed until the patient is again put under when the operator continues his work. In this way, working turn-and-turn-about, the operation is done. This particularly applies to work on the throat.

In order to overcome the disadvantages of the mask I decided to use Dr. Brophy's device and then, later, from my experience, I found it necessary to make some important changes in it, the result of which is a device which I have since used with a great deal of satisfaction.

My device consists of two bottles of the wide-mouth variety with a screw cap, one containing ether. With a handball air is forced through the ether and then passed to the second bottle, and from there through a rubber tube, which is supplied with a Y-shaped tip, with conical hard rubber plugs which fit snugly in the patient's anterior nares. In this way all of the etherized air is compelled to pass through the nose so that it is both warmed and humidified by the physiologic action thereof before it reaches the lungs. One great disadvantage of ether anesthesia with a mask is that the patient breathes cold air directly into the lungs, because mouth-breathing is chiefly employed, therefore post-operative bronchitis or pneumonia are often caused. With the method I have described this danger is done away with because the vaporizing is done outside the body, and the etherized air is practically at body-heat when it reaches the lungs, therefore the liability of pulmonary complications from this cause is avoided.

Another complication due to both the ether and the operation is increased salivation and blood, which may be drawn in the lungs and thus prove another cause for pulmonary complications. In order to overcome this I have adopted the plan of artificial aspiration. I tried several methods until at last I got down to something simple and practical, wherein a vacuum is produced in a bottle provided for this purpose. I have found this apparatus very satisfactory in nose-and-throat work and am thus able to secure a continuous anesthesia at a proper degree whereby pulmonary complications are avoided. Furthermore vomiting is to a large extent prevented as none of the secretions go to the stomach, and I also have the satisfaction of not having the anesthetist in my way or of my being in his way.

The aspiration device is suspended by a tape about the neck of the assistant. He holds the tongue depressor in his left hand and the aspiration tip in his right. Then as fluids gather he withdraws them by introducing the tip, a nurse meantime operating the suction pump.

I have adopted the Rose position, wherein the patient's head is held back at an angle of 45 degrees. I fail to find a hospital here fitted with a table designed for this position, so am forced to conclude that it is not commonly employed as in England.

I can add one point regarding the bracelet device shown by Dr. Herb. I have never used the device shown, but I have used something similar to it. I take a piece of tape three-quarters of an inch wide and over a yard in length and after tying the ends together make a double loop. These are secured one about either wrist of the patient and thus the hands are held in position crossed over the body. I will say that Dr. Herb's device appeals to me very strongly and I shall modify my method to conform with the position she advises.

I start in with the mask, then when I am about ready to operate the anesthetist takes it away, adjusts the nasal tips and in this way continuous, steady anesthesia is maintained. As the second bottle is empty it is utilized to catch any stray drops of ether, should the handball be too forcibly compressed. Inside of the second bottle is a smaller bottle containing chloroform. As the anesthetized air comes in, if any chloroform is required to produce more relaxation a little rubber ball on the outside of the bottle is squeezed slightly and the chloroform is thus forced up so that whatever is needed is injected into the outer bottle, and is thus added to the stream of etherized air. The amount of air passing through the ether can be regulated by the use of a swinging lever on the top of the first or ether bottle. By use of this lever the anesthetist can increase or diminish the per cent. of ether in the air stream to conform with the varying requirements, or the degree of anesthesia required.

Dr. Oliver Tydings: I am much interested in Dr. Ochsner's remark that if when operating one will confine himself to one anesthetic and let that be ether he will get along all right. That calls to my mind the time that I was an interne at the University of Maryland. It was my work to give the anesthetics and I remember reading an article by the late Dr. J. J. Chisolm in one of the medical journals that "chloroform was, through natural science, the greatest gift from God to man." I continued upon that theory and used chloroform continuously in surgical work for a great many years. I never had anything that even looked like an accident. Dr. Chisolm told me that he had used it in something like 10,000 cases without one. I used it for 25 years (fully that) without an accident when one day, about six or seven years ago I was preparing to do a mastoid (the gentleman who was giving the anesthetic knew his work, he had done work in the Presbyterian Hospital for years and was very capable). I remember particularly that on this occasion, just before I started to look over my instruments, that I did not know the name of the patient, so I asked the nurse. She said she did not know, but would ask him. She did so and he answered while the anesthetic was being given, before I could turn to go to the instrument table he was dead.

I believe there is a law of coincidence. I do not believe that chloroform had anything to do with that death. He had been walking around with a mastoiditis for thirty days. I saw him the day before and told him to come into the hospital and I would operate. I think there must have been a thrombus which slipped into the heart and he died because of a heart-plug. He was gone before I could turn around and yet he had spoken intelligently but a few seconds before. We had everything at our fingers' end but we were not able to rescuscitate him. In all my previous years I had not had an accident, nor have I since.

I do not mean to say that I confine myself strictly to chloroform, because I do not. Like Dr. Pynchon, I use anesthetics mostly for adenoids and tonsils. The position I use is to have the head 15 to 20 degrees lower than the feet and then there will be no possibility of blood getting into the lungs. I know that is the easiest way to operate upon the throat and I believe it has some advantages

as to safety. As to whether chloroform or ether is safest, I confess that in the hands of an untrained man I would rather take ether. I believe that it is possible to do less harm with it and the method used in Dr. Ochsner's clinic is a most admirable one.

I should like to ask Dr. Herb if she can offer any explanation of the sudden death of my patient.

Later: To make my case plain I will just add that the bottle was a one-ounce vial. You could not have put a teaspoonful more in the bottle. The man who was administering it says he had not at the very outside taken more than 30 drops from the bottle.

Dr. Nelson: I was educated to ether at Harvard. I went into service during the civil war with the idea that ether could not kill, but that chloroform was very liable to. In the army we were obliged to use chloroform because we could not get ether enough transported to keep supplied. During one of the battles when there were a great many men to be taken care of and it was important to do the work rapidly (we only tried to take care of the very serious ones, the others were cared for by nurses and comrades), we had our hospital tent just behind the brow of a hill, as near the firing line as we could. The sun was hot and a high wind was blowing—I remember that particularly because of what followed. A strong, hearty man, one whom you could well imagine may have been a blacksmith, was brought in shot through the humerus. There was no thought of anything but amputation. He was placed upon the table and given chloroform. Several thicknesses of towel were placed over the face and the chloroform dropped upon it, the man getting the vapor now fast and now more slowly, as the wind happened to be blowing. The man was almost ready for operation when he stopped breathing and was dead. We tried all the means of resuscitation at hand but he could not be revived. He was taken one side and the next patient was brought on, who (if I remember rightly) came for amputation of the limb below the knee. He was given chloroform in the same way and in a few seconds he was in a very dangerous condition. Fortunately he was revived. The chloroform was sent to the Surgeon General at Washington for examination to see whether it was impure, but it was Squibb's and of course nothing was found in it. I did not give it myself in the first case, but I did in the second.

To give you some sort of an idea of the rapidity with which it was given, I will say that my fingers were almost frozen by the evaporation in the breeze and I am sure that some of the time he got a great deal and some of the time none at all. It is just that uncertain amount of either ether or chloroform that makes them dangerous.

After coming to this city a year or so afterward one of my first cases for giving an anesthetic was in a dentist's chair. The dentist insisted upon chloroform being given. I did not know better than to attempt to give it in an upright position and the first thing I knew the patient was in a serious condition. We placed the patient in a reclining position and soon resuscitated her. One of the dangers in chloroform is the nervousness of the patient and the excitability and consequently the irregular respiration and the variable amount of the vapor inhaled. Sometimes they are getting a small quantity, sometimes a large and sometimes none at all, and in the hurry of giving the chloroform the danger arises. Undoubtedly there is far more danger in chloroform because it is stronger, but the manner of giving has very much to do with the question of safety.

Dr. Isabella C. Herb (closing discussion): In regard to Dr. Ochsner's remarks: we gave many of our patients scopolamin-morphin and finally decided to abandon it on account of the vomiting. In goiter operations very little chloroform or ether is needed. We had an accident which was the cause of our abandoning it. A physician's wife came in for a major operation. I anesthetised her. During the summer it was necessary for her to come back for another. She did not vomit after the first anesthetic at all. An interne gave the anesthetic for the second operation and he gave her a very small dose of morphin-scopolamin.

She came to the operating room, was operated upon and went back to the room and she vomited for 48 hours. Now if it was not attributable to that dose of scopolamin-morphin I do not know what caused it, because she did not vomit after the first anesthetic.

As to gauze: it is not necessary if the patient's head be turned to the side. Vomiting during the operation does not necessarily mean that drugs have been given, but just that they are waking up.

Dr. Bevan spoke of the simple methods. We can always advocate that. We believe that the simpler the methods and the more quiet the anesthetist the better. We believe that giving ether in the regular way, without interruption—changing from ether to gas and back again—is always the better plan. We believe if the patient is kept regularly asleep, instead of drowning them one minute and having them nearly out from under the next is always more liable to produce shock and vomiting. Keep them quiet and easy. During some operations of course it is necessary to have more profound narcosis but do not wake them up during the operation. We do not practice giving nitrous oxid gas except where patients have had ether and are afraid of it.

I might say something as to spinal anesthesia, but the literature of the day is full. Cases are reported to have died a year or a year and a half after the anesthetic was given. Many have developed paraplegia. Experiments upon the lower animals show that the cells of the spinal cord are injured beyond repair. Some who have not died suffer from constant head-ache, back-ache, etc. So that it is not only the immediate effects which we have to take into consideration, but the more remote and lasting results.

In regard to chloroform and the sudden deaths reported: usually when it kills (except through degeneration) it does so in the first few whiffs. After they are once thoroughly asleep they rarely die. I should be very much inclined to indicate chloroform as the cause of the death in the case where the nurse spoke to the patient one moment and then with the first whiffs of chloroform he died. That is usually the way they do go. I recall one similar case in which artificial respiration was performed for three or four hours but we were not able to resuscitate the patient.

As to nitrous oxid gas in heart lesions: we think ether can be given in heart lesions, even in fatty degeneration. We do not recommend it, but it should be settled by the imperativeness of the operation. It is really not the lesion, so much as it is the condition of the heart-muscle itself which should be considered. Internes sometimes say "now be careful, this patient has a heart murmur but it does not amount to much." Sometimes these cases are far worse than those in which there is a distinct murmur. Of course the ether must be given carefully. It is a stimulant, but no one should think of giving chloroform in these cases. Nitrous oxid gas raises the blood pressure a great deal more than does ether.

One physician spoke of beginning to give the ether by dropping it down upon the mask from a distance above it. We begin with the mask away from the face and in that way the patient received plenty of air mixed with the ether. Then we gradually put it down and the patients never complain of suffocation.

Placing the head away back is not as comfortable to either the patient or the anesthetist as it is to have it on the side. We also believe that our patients should be awake when they are leaving the operating room. As to when to stop the anesthetic: that depends entirely upon the rapidity with which the surgeon works. When the anesthetist works with one for a long time he can soon learn how he works and will know when to stop so that the patient will begin to come out before the dressing is quite done.

In tonsillitis and adenoid operations, many operators find that if the patient is very deeply narcotized they can finish the operation before the patient awakes. If they do not operate so rapidly, or even in jaw cases, Dr. Potts has perfected an instrument which will give very great satisfaction. The patient is put to sleep in the regular way and then the anesthetist switches to this apparatus. It can be used either in the nose or with the mouth gag and it works with the

foot, leaving the hands free. The bottle is placed down with the foot-rest and there is no danger of the ether passing into the mouth.

In the case of sudden death: nothing but an autopsy would have shown the cause. However, I am inclined to feel that it was the chloroform, knowing, as I said before, that it always kills at the beginning of the anesthetic.

Regular Meeting, March 8, 1911

The meeting was called to order by the president, D. Alex. H. Ferguson. Dr. Wm. Cuthbertson read a paper on "Diverticulitis of the Intestine."[1] Dr. V. C. David read a paper on "Intermittent Hydrarthrosis." Dr. C. Hubart Lovewell read a paper on "Some Practical Applications of the Caloric Check in Feeding."

DISCUSSION ON THE PAPER OF DR. DAVID

Dr. G. W. Hall: I would like to ask Dr. David if sodium cacodylate has been used in any of these cases, as one of the arsenic preparations. Urotropin is secreted by the spinal fluid and it has been recommended in the treatment of some forms of meningitis for that reason. It would be interesting to know whether any reaction for this preparation could be obtained from the fluid in such joint cases as these. It is interesting to note from the statistics given by Dr. David that the knee joint was the one most frequently affected as it is the joint of greatest activity and in this respect corresponds with the joint involvement in rheumatism.

Dr. Carl Wagner: I do not wish to touch upon this subject from a surgical standpoint. I do not see any reason why we cannot have them here as well as there. We may also suggest other remedies transportable which can be used readily at a distance from the place where they are taken, notably the radio salve and other radio preparations.

V. C. David (closing the discussion): I do not wish to add anything, but answering the question of Dr. Ball I will say that so far as I know sodium cacodylate has not been used but I believe I am safe in saying that probably every other drug has been and I think that the efficacy of any one drug has been time and again proven to be nil.

Regular Meeting, March 15, 1911

A regular meeting of the Chicago Medical Society was held, March 15, 1911, with the president, Dr. Alex. H. Ferguson in the chair. Dr. Wm. M. Harsha read a paper on "Aids in Abdominal Diagnosis." Dr. F. Kreissl read a paper on "A Rational and Efficient Treatment of Acute Gonorrheal Urethritis." Dr. A. Goldspohn read a paper on "Why the Vermiform Appendix Should Usually be Removed, when an Abdominal Incision, Made for Other Causes, is Available and the Condition of the Patient Admits of the Additional Operating."[2]

DISCUSSION OF THE PAPER OF DR. KREISSL

W. T. Belfield: This is an admirable presentation of local treatment. I think, however, that the author was unfortunate in entitling his paper "A Rational and Efficient Treatment of Acute Gonorrheal Urethritis"; for by his own showing it is not at all "rational" and not very "efficient." This criticism applies not merely to the method which he has outlined but to every method of urethral injection, for reasons which we all understand and which he has indicated.

The gonococci are not perched upon the topmost epithelial cells; they penetrate into the lymphatics and into the lacunæ, some of which open forward toward the meatus, some backward toward the bladder. Injections do not penetrate any of these, so all our methods of treatment by injection must be inefficient. Dr. Kreissl

1. The paper of Dr. Cuthbertson appears on page 555, followed by the discussion.

2. For text of paper see page 593.

says he is satisfied if he gets disappearance of the gonococci in from twenty to thirty days. Now in one-half of that time the gonococci have often invaded the deep urethra utricle, perhaps vesicles; and the urethral injection could not be efficient. Any treatment worthy the name "rational and efficient" must be one that acts through the blood; a substance which arrests the pernicious activity of the gonococci, wherever they may be esconced; something analogous to the diphtheria antitoxin. We have nothing of that sort against the gonococcus. Our vaccines are neither so rational nor so successful as is the antitoxin for diphtheria, which directly arrests the infection, neutralizes and arrests the process. Vaccines merely call upon the tissues for extra exertion; the tissues may or may not respond to the call.

I am inclined to think, therefore, that while Dr. Kreissl has given us an admirable exposition of the treatment which in the main we are all using and will use until a rational and efficient method is brought forth, yet his method cannot properly be called efficient.

V. D. Lespinasse: This method which Dr. Kreissl has brought up for our attention this evening is valuable in this way if in no other, namely, with it we can do no harm and if my experience and observations have taught me anything they have taught me that the average injection for acute gonorrhea is harmful in the strength given. The patient invariably complains of burning and smarting and in that way we do more harm than good. In surgery the use of strong antiseptic has been given up and we are content with washing with weak solutions and inhibiting bacterial growth. In gonorrhea it is the same. We cannot kill the gonococci and the only thing we can do is to inhibit the growth of the bacteria that are in the canal of the urethra. We should aim to keep the cells at their highest point of resistance and in doing that we do all the good possible and no harm.

Patients with this disease are crying and imploring for quick cures and asking for something that will burn. They seem to think that the more they are burned, the quicker they are being cured and if they are not burned they are not satisfied. I used to yield to their demands, but now I do not. My injections now do not burn and although I do not proceed just as Dr. Kreissl does, I do use weak injections and give them frequently and regulate the amount used by the degree of acuteness of the disease.

The only place I use a strong injection is in the very early stages where the discharge is mucus or muco purulent and the microscopic examination shows that the gonococci are still on the outside of the cells. At this time you do have an opportunity to kill all the gonococci and abort the disease. Give the strong solution, repeat the next morning and in 15 to 25 per cent. of your cases you will obtain cure at once. If you do not cure your patient you will have done him slight harm. I usually put it up to the patient, whether they want to take the chance, and they usually are willing to take the risk.

A. N. Devault: It seems to be the concensus of opinion that the weak solution is the thing. Dr. Kreissl spoke of acute cases and they seem to be under discussion. Protargol, as Dr. Kreissl says, I know can be used with safety and to good purpose. I have used it in one-eighth to one-fourth strength but one thing must be remembered: the solutions are no good after a few days' use. I have yet to find a case where they will accomplish anything after the fifth day. After that, as you know, we still have gonococci. So, after I have used the argyrol for four or five days I use the astringent and for this purpose a combination of zinc and chloral iodin is one of the best that I have found. I have them use the argyrol as frequently as they can be persuaded to do so and then in five days begin the astringent and it will stop the progress of almost any case. I never use the two together except in the rare instances when a patient comes in, says he has just been infected, then if you use the astringent you will get along without further injections. So I wish to impress this fact, do not use the argyrol too long before beginning the astringent.

F. Baumann: As to the treatment of gonorrhea: It is not a question of drugs. It is the method of treatment. Every clinically active substance can be used if the doctor who uses it has a certain kind of scientific training. We are limited to the production of injury because medicines are not clinically active, and will, therefore, not reach the bacilli, so that the only thing we have before us is to take care of the patient himself, his resistance, so that the drugs have a chance to do their work. The resistance of the patient can be markedly increased or decreased by the habits by which he is surrounded.

As to the solutions: In this way we can also explain why solutions used in the urethra cannot be used on the outside, because they work not only as antiseptics, but as irritants. To demonstrate that clinical methods can be used I have used nitric acid and auric acid and got just as good results as I have from argyrol. I, too, use the solutions weak. I know that protargol is rational, but it is only rational from the manufacturer's standpoint!

About that beer test: that is entirely unsatisfactory and unscientific and I am much surprised that it should have been mentioned here to-night. It depends upon the location. You may have a membrane which secretes all the time.

The microscopic examination does not mean anything at all in gonorrhea. Nothing is easier than to get rid of the gonococci and have nothing but leukocytes after ten days and still the disease is not cured. I have treated as high as 34 cases in a day and I examine them microscopically and I have never succeeded in curing a case of gonorrhea in twenty days. If I get them out in two or three months pretty well cleaned up I am satisfied and think I have done well.

A. E. Bertling: If the treatment outlined by Dr. Kreissl has been shown not to be thoroughly efficient I think we must agree that it is the most rational that has been brought out up to the present time, although it is not new. Experience has shown that if it is carried out as Dr. Kreissl has suggested it does give certain good results.

There is only one point, probably, that I should consider of some importance which Dr. Kreissl might have mentioned. I believe that it is important to lessen by all means the congestion of the organ and for that reason I tell my patients to abstain from meats and highly seasoned food, liquors and all nitrogenous foods in a general way. I believe if we place our patients on a diet of buttermilk and water, then our local treatment will be much more efficient because everyone knows that even wet-dreams or the erection of the parts will cause a congestion which will be followed by an increase in the discharge from the urethra. Experiments carried on in Europe have demonstrated that by placing these patients on a strictly abstemious diet the treatment is greatly enhanced and they consider this of probably as much importance as any other measure.

H. A. Kraus: I must confess that I have not had these easy cases. When my patients come to me there is usually marked congestion with peri-urethral infiltration. I cannot tell my patients to take a syringe, go home and use it, because in the condition in which I find them that is very painful, in the first place; and in the second place these injections of argyrol stain the clothing, which is very obnoxious to the patient.

From my personal experience I know that argyrol will not cure as quickly as silver nitrate.

F. Kreissl (closing discussion): Owing to the lateness of the hour, it is impossible to reply to all the points brought out in the discussion. It seems to me that most of the gentlemen who disagree with my views and statements did not give my paper the proper attention, or else misunderstood the subject.

My remarks refer to the treatment of anterior gonorrheal urethritis in its earliest stage, and still uncomplicated. For the same reason I am not able to reply to Dr. Belfield's otherwise excellent remarks, since he was talking about complications, which are not included in my paper, and which as I said and know, can be avoided by my method of treatment.

The objection to the title "An Efficient Treatment" is inconsequential, you may call it rational if you please, but one thing is sure, in its results it is efficient.

It is sure that by this method, if methodically employed in the early stage of the disease, you will see all acute symptoms subside within twenty-four hours, and you will rarely, if ever, observe a complication.

If a patient cannot be induced to follow the instructions of his physician, you must not blame my method for the failure to cure. Such patients I should refuse to treat.

Neither is it the fault of the method that the patient with very acute inflammatory symptoms complains of the slight pain caused by the injection; this pain is certainly not greater than that caused by the urine passing over the inflamed urethra, and just in these cases the rapid subsidence of all these symptoms under this method of treatment will be appreciated.

The case Dr. Kraus refers to in which nitrate of silver had to be employed after protargol failed is simply a corroboration of my statement, that certain conditions like granulations appearing very early sometimes require silver nitrate applications.

The practitioner comes in contact with the early stage of acute gonorrheal urethritis much oftener than the specialist, and it is the purpose of this paper to put in his hands a method which will shorten the course of the disease, and change a trouble generally considered as very serious into a mild one. While in this way the financial return of each case might be smaller, yet this loss will be fully made up by the growth of the prestige and belief in the ability and skill of the physician.

CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY

Regular Meeting, Feb. 21, 1911

The president, CHARLES ROBERTSON, presided at the meeting.

LANTERN DEMONSTRATIONS OF THE OPERATIONS FOR EXTERNAL NASAL DEFORMITIES

JOSEPH BECK, M.D.

Dr. Beck presented the subject of "Operations for External Nasal Deformities," by first presenting a case of a form of such conditions: Mr. J., aged 27 years, met with an accident five years ago by touching a live wire which caused marked destruction of his face and arms. The right arm was so markedly affected that amputation became necessary. The loss of tissue about the face consisted mostly of skin and subcutaneous connective tissue except the nose, in which the entire left alar cartilage was consumed, leaving the lesions (as shown in the diagram) unilateral deformity. This case has been of interest from another point of view, namely: the action of fibrolysin in softening the scars.

This remedy was administered in order to make the structures more pliable before operation so that perfect coaptation could be obtained. This result was clearly manifest by palpation, in that the scars became freely movable, but of much more interest was the microscopic study of scars removed from time to time during the administration of fibrolysin, which was positive in demonstrating the fluffing of scar connective tissue.

Another point of interest in connection with this case was the method proposed by Dr. Beck, for remedying the defect of left ala. The patient has a projection of the anterior septal cartilage which Dr. Beck intends to utilize to take the place of the missing ala, performing the operation at two different times, severing the projecting portion from the remaining portion of the septum only after it has become attached to the external wall of nostril.

The case was presented before operation so that the members would have the opportunity of comparing the result obtained from the plastic work with the condition found before operation.

Dr. Beck further demonstrated by means of lantern slides the various external nasal plastics, beginning with the Italian method, introduced by Togliocozzi in 1547 and ending by the most modern operations for external deformities by the intranasal route—altogether about fifty varieties of procedures were shown.

SOME RAMBLING THOUGHTS CONCERNING THE SUBJECT OF RADICAL MASTOID OPERATIONS

DR. FRANK ALLPORT

The Incision.—The incision is long and curved over the auricle. The mastoid tip is freed from the tendinous tissue by curved scissors, the periosteum is pushed back, the cartilaginous and osseous meati are separated by a spatula, a gauze strip is passed through the meatus to hold the cartilaginous meatus out of the way, and then the self-retaining retractors are placed in position and screwed up to their widest expansion. Artery clamps are not used, the retractors stop all soft tissue hemorrhage. One pair of retractors is placed in the upper end of the wound and one pair in the lower. Unless the cerebellum or the backward course of the sinus are to be opened, no backward incision is necessary. A long incision and widely expended retractive supply an ample operative field. These retractors are far superior to hand retractors in every way.

The Chiseling.—Broad chisels should be used wherever possible. They are safer and quicker. The cortex should be shaved off until the interior of the bone is exposed, then we can proceed more surely. By care the sinus will not be opened, and if the primary bone chiseling does not extend higher than the roof of the meatus, the dura will not be exposed. After the cells are exposed it may be necessary to chisel higher, but higher chiseling should be discouraged until the cells are exposed. Peculiar bones are sometimes seen with backward shelving meati giving a wrong impression as to the location of the bones' contents. The margin of the meatus is thrown much too far backward, and if chiseling is begun here the sinus will probably be opened. These bones should be recognized, and chiseling should be based on the place where the meatal margin *should* be and not where it is.

The posterior wall of the bony meatus is chiseled down at the same time as the contiguous bone; it has to come down anyway and might as well come down at first as later, and it makes more room for operating. The outer one-third of the posterior meatal wall should be cut down so that there is nothing of it left, but much circumspection should be exercised in working upon the inner two-thirds, for inside of its bony structure passes the facial nerve. The inner portion of the meatus, or the "bridge" as it is sometimes called, can be best cut away by careful chiseling. The higher up we chisel, curette or bur, the less is the danger of hurting the facial nerve.

The Use of the Bur.—The bur is the best, quickest and safest method of cleaning out the interior of the bone and is especially useful in delicate and dangerous locations. Everybody should learn how to use it. All necrotic areas can be swiftly and safely removed by the bur, and it produces a beautiful, smooth, healthy cavity, unequaled by any other method.

The Eustachian Tube.—The tube should be thoroughly curetted, not forgetting the close relationship with the carotid artery. The points of curettes should always be directed forward and upward to avoid injury to the artery. Dr. Allport also uses round hand burs of different sizes to clean out the tube and frequently rims out the tympanic orifice of the tube with the electrically driven bur, but one should be an expert in handling the bur to do this. Not only should the granulating mucous membrane be removed but some of the bone at the orifice should also be removed in order to absolutely close up the tympanic orifice of the tube and prevent permanent tubal dripping, which presents the appearance of an uncured case. Sidney Yankauer's new tube curettes are useful instruments. Of course, all significant nose and throat complications should be relieved.

The Flap.—Dr. Allport still uses a modified Panse flap with the entire flap turned upward instead of one half up and the other half down, as recommended by Panse. In other words his lines of incision represent a letter L instead of letter T. He still uses the metal Michel sutures.

The Dressings.—He packs the cavity with gauze until its shape and outlines are established, which takes from two to three weeks. After this he completely fills the cavity at each dressing with powdered boric acid. His cases are usually, but not always of course, healed in from eight to ten weeks.

The Heath Operation.—Dr. Allport still believes that this operation is based upon unsound surgical principles and neither uses nor recommends it.

Grafting.—He rarely finds grafting necessary but if, in about three months, there are any unhealed areas, he inserts small thin shavings of skin. He has always been opposed to Dench's primary grafting on recently chiseled bone as it did not seem likely that grafts would adhere and live until some granulations had covered the bone. A recent visit to Dench's clinic, however, and a careful observance of his work and results have convinced him that his methods are admirable and well worthy of emulation.

DISCUSSION

Dr. Joseph C. Beck: As usual Dr. Allport has presented the subject in a masterful manner and many new points of interest have been brought out. There are, however, a few little points that might be mentioned that play an important rôle in the technic and healing process of the radical mastoid operation.

In the first place, Dr. Allport made no mention of the influence of the pathologic condition on the healing process. For example, where there is cholesteatomatous infiltration of bone the healing is much delayed. In the second place, Dr. Beck is in favor of more conservative treatment, particularly where there is suppuration in both ears and the radical procedure might cause the patient to lose the hearing in both. In this case, if in no other, the semi-radical procedure is indicated on one side, with the hope of leaving the patient more hearing.

Dr. Holinger: Dr. Beck drew our attention to the pathology of the condition for which we are most frequently called upon to perform radical mastoid operations, namely, the cholesteatoma. We know that the cholesteatoma matrix is nothing else but an epidermized scar, which took the place of destroyed lining of bone in the mastoid process. Every bit of this epidermis ought to be preserved because the epidermization of the whole cavity starts and progresses from these islands of epidermis. Dr. Holinger would like to caution against Dr. Allport's advice about drilling the bone with an electric bur until there is a cavity surrounded by smooth walls, because in so doing he can not help destroying the islands of epidermis so valuable for the shortening of the period of recovery. There is not even any advantage in this concerning the final result because the granulations which form will change the size and shape of the cavity so that we hardly can compare it to the original one.

Taking care of the Eustachian tube is another point where opinions differ. Dr. Allport and many other operators are certain that they always can produce a bony occlusion of the tube. Other equally trustworthy authors insist that this desideratum can only exceptionally be reached and that often a fistula remains which later on keeps the cavity moist. Add to this uncertainty of success the danger of injuring the top of the cochlea, which means destruction of a part or all of the remnants of hearing often so valuable to these patients, and you have the reasons for the fact that Dr. Holinger did not formerly nor will he in future, in treating the Eustachian tube, go beyond careful removal or cautery of granulations around the opening of the tube. Nevertheless he thinks he can favorably compare his results with those of Dr. Allport, as already in 1898 before the Chicago Medical Society he presented patients with perfectly dry and epidermized cavities six weeks after radical operation was performed. Dr. Allport speaks now of eight to ten weeks and another gentleman shortly before his presentation in 1898 had given the time of three to six months.

Dr. Boot stated that he wished to call the attention of the society to a point that he had mentioned before in this society, namely, that the facial nerve in infants emerges opposite the middle of the annulus tympanicus and is in great danger of being cut off if the incision is made as far downwards as is usual in adults.

Another point of importance in mastoid surgery is that great care should be used in curetting the upper posterior quadrant of the tympanum for fear of injuring the facial nerve, which is covered here by only a thin layer of bone and at times is not covered at all by bone. There is danger also of dislocating the stapes and thus opening up an avenue for infection to enter the labyrinth if one curettes in this region. Fortunately the stapes is partly protected by the overhanging facial ridge. It is best not to curette at all in this region.

When we remember that the carotid canal is separated from the tuba auditiva and from the tympanum by a layer of bone that is often no thicker than a sheet of paper we must congratulate Dr. Allport that he has never perforated the internal carotid artery in reaming out the tympanic orifice of the tuba auditiva by an electrically driven bur that is so powerful that he finds it necessary to hold it with both hands to keep it from wobbling. Dr. Boot is very much afraid that if Dr. Allport were to perforate the carotid and find it necessary to ligate that the circle of Willis would make more than one ligation necessary.

Dr. Shambaugh does not think that Dr. Allport emphasizes sufficiently the danger to the hearing in the radical mastoid. Where a person is forced to rely upon one ear for the hearing one must be very slow about doing a radical mastoid. Under these circumstances if conditions demanded an operative interference for relief Mr. Shambaugh would be inclined to stop short of a complete radical and relieve the conditions without cleaning out the tympanic cavity. He has recently been forced to operate upon a case where a cholesteatoma in the antrum, breaking through into the meatus produced so much pain and discomfort that an operation had to be done. The hearing in the opposite ear was practically gone and the patient relied upon the ear with the cholesteatoma for hearing. Under these circumstances the incomplete radical is preferable even although the patient may have annoyance from time to time from secretions.

Dr. Shambaugh can hardly justify the work which Dr. Allport does around the tympanic orifice of the Eustachian tube with the electric bur, etc. The internal carotid often makes a prominence in the tympanic cavity itself so that using the large bur at the orifice of the Eustachian tube, may easily break into the carotid even without entering the Eustachian tube. He does not hesitate to curette away granulations which occupy the tympanic orifice of the tube. No amount of work in the Eustachian tube can hope to eradicate the tubal cells which one frequently finds leading off into the bony structure.

Dr. Shambaugh does not understand clearly Dr. Allport's method of placing the floor of the meatus and the tip of the mastoid on the same plane. There must always be a decided ridge left between tympanic cavity and the depth of the mastoid, because the facial nerve, which is on a level with the inner wall of the tympanum in the region of the oval window, comes out more and more along the posterior wall of the canal on its way to the stylo mastoid foramen.

GREENE COUNTY.

The Greene County Medical Society held its regular meeting in Kane, Friday, March 10, 1911. The meeting was called to order at the Masonic Hall at 1:30 p. m., with President Day in the chair. Drs. McLaren and Foreman were appointed censors pro tem. The minutes of the previous meeting were read and approved.

Members present: Drs. J. W. Ross, Jas. Squires, Carrollton; E. G. Proctor, C. B. Foreman, E. W. Fenity, Kane; W. C. Day, H. W. Chapman, F. N. McLaren, E. K. Shirley and H. A. Chapin, White Hall. Visitors present were: C. E. Black,

Jacksonville; H. W. Hand, L. O. Fresh, White Hall; A. K. Vanhorn, H. R. Gledhill, M. Titterington, H. R. Bohannan and Grimes of Jerseyville.

Resolutions adopted by the Williamson County Medical Society, relative to medical education and medical schools, were read and discussed at length. On motion of Dr. Ross action on the same was deferred until Dr. Black's paper was read. Dr. Black then read a paper on "Medical Education from the Standpoint of the Patient," giving in a very concise and interesting form suggestions as to needed reforms in our medical schools. The paper brought forth interesting and spirited discussion, after which, on motion of Dr. H. W. Chapman, the following resolutions were adopted:

WHEREAS, There are in Illinois a number of medical schools which are not qualified to impart a medical education, and are consequently a menace to the public; therefore, be it

Resolved, That we respectfully request our legislature and governor to adopt such laws or measures as will give to the state only high-class medical schools.

WHEREAS, Great injustice is done to the cause of medical education, the care of the sick and the members of the duly licensed medical profession by the several standards of medical licensure now in existence; therefore, be it

Resolved, That we ask our legislature and governor to establish and maintain one educational standard and one medical examination, except in therapeutics, for all who are licensed to treat human diseases.

Resolved, That the Greene County Medical Society hereby heartily endorses the work done and the standards of medical education adopted by the Council on Medical Education of the American Medical Association.

Resolved, That a copy of these resolutions be sent to Governor Deneen, to our state senator and to each representative from this district; also to the Council on Medical Education of the American Medical Association.

H. A. Chapin was elected delegate and H. W. Chapman alternate delegate to the State meeting to be held in Aurora May 16, 17 and 18.

Question of fees for life insurance examinations was brought up by Dr. McLaren, who moved that the fee table of the physicians of the county society should specify examinations for old line life insurance companies, $5.00; for assessment companies, $3.00, and fraternal companies, $2.00. Motion was unanimously carried.

The censors reported unfavorably on application of Dr. Kincaid for membership. Next place of meeting is White Hall, second Friday in June. Drs. W. C. Day and A. W. Foreman, of White Hall; E. G. Proctor, of Kane, and J. W. Adams, of Carrollton, essayists. After which the meeting adjourned.

H. A. CHAPIN, Secretary.

MADISON COUNTY

One of the best meetings of this society was held in Edwardsville on the afternoon of April 7, 1911. Dr. J. L. Greene, alienist of the Board of Administration presented the subject of "The State Care of the Insane." The paper was full of valuable information and presented details of the most advanced methods of treatment as carried out by our state authorities. The value of the early diagnosis of insanity was dwelt upon as was also the great value of early treatment of this disorder. Dr. Eugene Cohn, formerly a member of this society, but now assistant superintendent of the Peoria State Hospital, opened the discussion and materially increased the interest of all present in this very important subject.

The subject of the next paper was "Some Feeble-Minded Problems," by Dr. H. G. Hardt, Superintendent of the Institution for Feeble-Minded, at Lincoln, and it was presented in an interesting manner much to the delight and edification of the members. The discussion led by Dr. W. H. C. Smith became general and developed a great deal of useful knowledge. All the papers and discussions were highly appreciated by our members and a rising vote of thanks was tendered to our essayists. The death of Dr. T. L. Foulds, of Alton, being announced, the chair appointed a committee on resolutions consisting of Drs. Pfeiffenberger, Riley and Fiegenbaum, all of Alton. Besides our honored guests mentioned above the following were present: Members—Drs. Hirsch, Hastings, Wedig, Riley, Johnson, Beard, Wahl, Pfeiffenberger, Sims, Yerkes, Wilkinson, Schreifels, Kes-

singer, McKinney, Lemen, Oliver, Merwin, Sutter, Smith, Tulley, J. H. Fiegenbaum, Kerchner, Molden, Robinson, Wharff, Vogt, Braner, Ferguson, Barnsback, Taphorn and E. W. Fiegenbaum. Visitors: Dr. C. W. Lillie, of East St. Louis; Dr. W. C. Phipps, of Maryville; Dr. Thos. C. Marion, of Worden; Drs. Corbett and Weidman, Rev. J. W. McNeil and trained nurse, Mrs. T. E. Amos, of Edwardsville.

The next meeting will be held at Collinsville on May 5, and the subject for the day will be, "Cholera Infantum, and Allied Conditions."

This society is growing in membership and usefulness, and it will not be long until every eligible physician in the county will become a member. The experiment of changing from quarterly to monthly meetings has been highly successful, as we now have a larger attendance than we formerly had at our quarterly meetings. E. W. FIEGENBAUM, Secretary.

MASSAC COUNTY

The annual meeting of the Massac County Medical Society was held Jan. 12, 1911, in the club rooms in City National Bank Bldg., Metropolis, Ill. The following officers were elected for the year; Dr. A. E. Miller, president; Dr. J. A. Helms, vice-president; Dr. G. B. Bormann, secretary; Dr. J. A. Orr, treasurer; Dr. G. W. Walbright, was elected as delegate. The following were appointed as board of censors: Dr. R. H. Jacobs and Dr. G. W. Walbright, Dr. J. A. Helms was appointed as member of medico-legal committee.

Dr. C. E. Trovillion gave a short illustrated talk on "Tinea Sycosis," which brought on a general discussion by all present, as to differentiation, diagnosis and treatment.

MORGAN COUNTY

Special Meeting, March 31, 1911

March 31, 1911, the society met in special session to hear the report of Dr. Adolph Gehrmann of the Columbus Laboratories, Chicago, who had been secured to make a sanitary inspection of the new source of water supply for Jacksonville from their wells north of the city. After reading his report, a number of the members discussed the situation and Dr. Reid moved that the report of the committee embodying the report of Dr. Gehrmann be accepted and filed, that the committee be continued and requested to have applied, if possible, certain tests advised by Dr. Gehrmann in order to determine positively whether the Widenham-Daub wells are readily susceptible to contamination from the highly contaminated surface surrounding the wells. Seconded by Dr. McLaughlin, carried unanimously. A. R. GREGORY, JR., Secretary.

Regular Meeting, April 13, 1911

The Morgan County Medical Society held its regular meeting April 13, at the Public Library, Jacksonville, Illinois, with President Woltman in the chair. The following members were present: Drs. Black, King, Ogram, Cole, Bowe, Woltman, Stacy, J. U. Day, Duncan, Hardesty, Norris, Hairgrove, Campbell, McLaughlin, Reid and Gregory.

Dr. Samuel D. Anderson of Concord, was unanimously elected to membership.

Dr. Black called attention to the new *x*-ray which was lately installed at Passavant Hospital by the Scheidel Western X-ray Company of Chicago.

Dr. McLaughlin reported a very interesting case of ascaris lumbricoides.

"About the seventh of February a boy was admitted to the hospital of the School for the Deaf. History of asthma since infancy. The child was in the hospital only a few hours when his temperature began to rise. History of cough. Had a secondary pneumonia of the right lung, temperature running 105, pulse 144, respiration 40. This child was physically below par and apparently mentally deficient. Crisis came in the night of the fifth day. During the fifth

day very decided amount of mucous coughed up. The child being dull and not being teachable, at once swallowed everything that came into the mouth. The temperature during the next twenty-four hours was 99, 100 in the evening with pulse of 108 or 110. Then temperature came up again with considerable distention of the abdomen. During the course of the pneumonic attack I gave a few doses of creosotal. During this attack of pneumonia the wretchings of vomiting were present more than I have been in the habit of seeing. Just after temperature had dropped to 99 degrees, a few hours afterward, nurse noticed something hanging out of the child's mouth, put a towel over it and withdrew a lumbricoid. There was an acute intestinal poisoning. In five or six days the intestinal toxemia subsided. In order to guard in the future against this, I put the child on acetozone. In about 36 hours the child became acutely nauseated and in one of the wretchings following the attacks of vomiting, he got up three lumbricoids. I put the child on santonin and calomel followed in the morning by salts and after with one-half ounce of oil. When I started the salts the child within a few hours went into spasms. These spasms were continuous over most of the twenty-four hours. The next day I continued the treatment. At the end of the second treatment the spasms increased to such a degree of severity that I was forced to control them with ten grains of chloral. The spasms became very severe and in the interim between the paroxysms he had a paralysis of the right arm and right leg. The secretory functions of the skin were diminished slightly. The third attack of paralysis and intestinal toxemia called for heroic measures and I decided to give 12 grains of santonin in divided doses of 4 grains each followed in morning with ½ ounce of salts. Chloral was needed to control spasms. Condition was extreme, pulse 140, irregular respiration, but notwithstanding this I felt that I must repeat the dosage, so I gave mercury followed with salts in large doses. It came to my mind that this mass must have come from childhood or infancy and possibly amounted to several hundred lumbricoids and if this number of dead were wrapped in a wall there and not passable to the upper or lower bowel, the result would be a soluble material which would be digested and toxemia would take the life of our patient. In order to prevent this I began the use of acetozone and have used it ever since. We have taken about seventy-five worms of full length. Sometimes there would be two or three worms and five to 100 pieces of worms. The child had hovered on the border of very extreme toxemia until possibly ten days ago. Now only every two or three days we get a worm in sections and sometimes the skin of the worm without the worm. I have been giving the acetozone and each night a grain of chloral and salts in the morning or oil. The child is improving. About four weeks ago whooping cough come into the institution and he had it, but is getting along nicely. During the whole attack the patient has had an accompanying nephritis.

The paper of the evening, "The Study of Pathology of the Living," was read by Dr. Edward Bowe, who said in part:

THE STUDY OF PATHOLOGY OF THE LIVING

EDWARD BOWE, M.D.

The diagnosis and treatment of a diseased condition based upon empiricism must necessarily be inaccurate. The well recognized fact that a group of well defined symptoms frequently met with in disease may be attributed to widely varying pathologic or disturbed physiologic functions has been the real stimulus in the development of the diagnostic methods of modern medicine and surgery. Since the publication of the essays of Morgagni of Padua in 1761, in which he attempted to give a very complete picture of morbid processes by carefully comparing the clinical aspects of disease with the anatomical findings, in a large number of cases the symptomatology, diagnosis, prognosis and treatment of disease by the medical profession has been largely if not wholly based upon pathologic basis.

While post-mortem study of tissue changes produced by disease affords a basis upon which we formed our opinion as to the probable pathologic process that is causing a single symptom or a symptom complex in the living subject whose history and symptomatology may correspond wholly or in a degree with those in a subject in whom a disease has been diagnosed or a diagnosis confirmed by post-mortem study; yet there is much to be learned by study in the living subject that not only furnishes us with an accurate pathologic basis upon which to found our opinions clearly and definitely as to the symptomatology, diagnosis, prognosis and treatment but also furnishes us with the personal equation physiologically and pathologically and that must be studied as a personal entity along these lines in every patient.

The position occupied by modern surgery as compared with internal medicine in a marked degree emphasizes the foregoing statements. While the development of asepsis, antisepsis and improved surgical technic has contributed much to this prestige, yet the great determining factor in the process of evolution has been the zeal and accuracy with which surgeons have pursued pathologic study both post-mortem and in the living subject and the application of their findings and conclusions to the practice of their special line.

The degree of reasonable assurance that prevails in surgical diagnosis and operative surgery is the natural product that pathologically can only be produced in a lasting form by material experience and observation. While this line of study has been of immeasurable value, yet it has not been without its disadvantages. Unfortunately with those surgeons of limited training, experience and ability in attempting to imitate or follow in the footsteps of those who were properly qualified. The practice of surgery in such hands resembles a calling more closely related to the mechanical arts than that of a profession dealing with a complex highly organized living body that should in each and every case be studied as an individual entity, anatomically, physiologically and pathologically.

The same condition in a marked degree prevails at present as applied to internal medicine. The failure to recognize that diagnosis is the cornerstone of medicine and surgery, and that diagnosis to be reasonably accurate and certain must be based upon study along the lines we are here considering and that dependence upon specific remedies directed toward symptomatology alone is not only uncertain but also a serious handicap to both preventive and scientific medicine is unfortunately too prevalent in the present-day practice of internal medicine.

In this brief paper it will be attempted to emphasize the value in each case of having a definite idea and mental picture of the pathologic process of the clinical findings as they confront us in daily practice.

Because of the opportunities offered for immediate observation and study of pathologic lesions in the living subject we begin with the field of operative surgery in its various fields. In many cases the operating surgeon is able to subject to visual inspection and palpation the lesion responsible for the symptomatology toward which he is directing his treatment, and from such findings and operative technic he is in most cases able to give a definite prognosis regarding the immediate and remote possibilities of his patient. He also considers well any existing impairment of physiologic function or any such disturbance that might result from the surgical procedure in hand, and without such a definite mental picture constantly before him, a surgeon's operative procedure is mere experimentation and an injustice to a great and learned calling.

I will venture the statement that a great majority of surgeons will say that the lessons in pathology learned at the operating table while dealing with the living subject have been their most valuable asset in diagnosis, prognosis and treatment in their future practice. Let us presume that it were possible for the internist to be as familiar with the pathologic conditions that are responsible for the various pulmonary diseases as is the surgeon with the various conditions found in the different manifestations of the various intra-abdominal lesions. Compare side by side the method of reasoning employed by the average internist

in the various types and stages of pneumonia, with those of the competent surgeon in dealing with a case of appendicitis.

While here there is no attempt to cast discredit upon or belittle the work of the body of men in internal medicine who are in the front in the establishment of scientific medicine and surgery, yet we must all admit that the old tradition of a practice based upon symptomatology and a dependence upon specific remedies is still with us and too slow in departing

DISCUSSION

Dr. Carl E. Black: It is very interesting to go over the steps which have lead us to a better understanding of the pathologic conditions as they have developed out of operative observation. We should organize our opportunities in this community for pathologic observations and study our cases together. We have several hundred cases every year in Jacksonville where the abdomen for example is opened. If we would organize that work every physician in the community should have the opportunity of observing those conditions. Most perplexing conditions arise regarding diagnosis of cases. One of the most interesting and instructive illustrations of the value of pathology of the living is found in duodenal ulcer. I believe it should be a fixed principle in the mind of every doctor that a patient that has a definite group of symptoms has some place a definite pathology and it is our duty to find it.

Drs. Woltman, Stacy and Hairgrove also took part in the discussion, after which the society adjourned.

PEORIA COUNTY

The Peoria City Medical Society met Feb. 21, 1911, with president Dr. A. L. Corcoran in the chair and a good representation of the membership present. Drs. Collins and Weber reported a case of Renal Calculus, showing skiagraphs, and illustrating the advantage of having the *x*-ray plates before the surgeon during the operation. Dr. J. H. Bacon read a paper on "Mental Deficiencies, Aside from Mental Disease." Dr. Geo. Michell led in the discussion, and Prof. Packard of the Bradley Politechnic took part.

Regular Meeting, March 7, 1911

On this date the society enjoyed a deviation from the usual scientific program, listening with interest to the following:

BUSINESS SYMPOSIUM

Sane and practical investments for the physician.

Real Estate ..... Att'y W. W. Hammond
Life Insurance ..... Chas. A. Macauley
Building & Loan ..... J. C. Rambo
Mortgage Loans ..... Walter A. Causey

These men are leaders in their separate lines, and much reliable legitimate information was imparted.

Resolutions were adopted endorsing the appropriation by the state of $100,000 per year for furthering the interests of the Medical Department of the State University.

MEDICAL BANQUET

On March 15 occurred the annual banquet of the society. About 100 physicians and dentists and their wives enjoyed a $2.50 per plate dinner, and the following toasts:

President's Address ..... Dr. A. L. Corcoran
The Relation of the Physician and Dentist to their Profession and to the Community ..... Dr. A. C. Cotton, Chicago
Vocal Solo ..... Mrs. W. C. Williams

Ideals .....Mrs. Clifford U. Collins
Legislation and the Practice of Medicine.....Senator John Dailey
Our Professional Relations .....Dr. W. A. Johnston, Dentist
A social time followed.

Regular Meeting, March 21, 1911

At the second semi-monthly meeting of March the pending osteopathic bill was given careful consideration, and a committee appointed to confer with the senator and representatives from this district. The committee consists of Drs. Kerr, Collins and Farnum. Committee on medical inspection of schools reported that active measures are under way to inaugurate a system of inspection. Dr. Bacon moved that this society invite the state society to meet in Peoria in 1912. Dr. Wm. B. Eicher was the essayist of the evening, and read a paper on "A Study of the Value of Psychic Influences."

Regular Meeting, April 4, 1911

At the regular meeting of April 4, Dr. E. S. Judd, of Rochester, Minn., read a paper on the subject "Post-Operative Ventral Hernia, and Plastic Abdominal Closures." An informal dinner was arranged by Drs. Hanna and Collins at the Creve Coeur Club for 6 p. m.; it was well attended by the profession.

E. W. OLIVER, Secretary.

JACKSON COUNTY

The April meeting of the Jackson County Medical Society was held in the parlors of the Jackson Club at Murphysboro, Ill., April 20, 1911: present, Drs. Horstman, Molz, Grizzell, Ormsby, Sabine and Essick, of Murphysboro; Dr. Mitchell of Carbondale; Dr. Estel of Jacob. Visitors: Dr. Gault of Sparta; Dr. J. W. Pettit, Ottawa.

Program: Dr. J. W. Pettit, of the Ottawa Tent Colony, read a very excellent paper entitled "The Early Diagnosis of Tuberculosis and How to Make it." Discussion, Drs. Mitchell, Molz, Horstman, Grizzell, Gault. Dr. C. O. Molz of Murphysboro presented a case of fracture of the elbow and also a case of partial paralysis of the vocal cords

Adjourned.

RAY B. ESSICK, Secretary.

STARK COUNTY

The Stark County Medical Society met in the City Hall, Toulon, April 11, 1911. Dr. M. T. Ward, Toulon, was elected president; Dr. R. L. Buffum, Toulon, was elected secretary. Dr. Finley, of Galesburg, gave a very good talk on "Drainage."

R. L. BUFFUM, Secretary.

NEWS OF THE STATE

NEWS

—Dr. C. E. Peel and family have removed to Decatur.

—Dr. G. H. Henry has removed from Robinson to Oblong, Ill.

—Dr. George E. Pope of Niantic is preparing to move to Canada.

—Dr. W. M. Hartman has removed from Good Hope to Macomb.

—Dr. J. M. G. Carter of Chicago has removed to Los Angeles, Cal.

—Dr. Hyman Brunswick of Pittsfield has returned from Hot Springs, Ark.

—Dr. W. S. Taylor and family of Tallula will move to Berlin in a few days.

—Dr. Edward P. Bartlett of Springfield retires from practice because of ill health.

—The offices of Drs. Bradway of Abingdon, Ill., were destroyed by fire March 11, 1911. The loss is about $1,000.

—Dr. W. H. C. Smith and family of Godfrey have returned from the south where they have spent the last two months.

—Kenyon Elder, the 14-year-old son of Dr. and Mrs. Elder, died March 9, 1911, at his home in Franklin, Ill., of diphtheria.

—Dr. and Mrs. J. H. Barber of Pittsfield have returned from St. Petersburg, Fla., where they have been spending the winter.

—The Physicians Furniture Exchange has removed to 121 N. Wabash Avenue. Increase of business demanded an enlarged floor space.

—Dr. A. J. Foster has sold his residence in Peoria to Dr. W. T. Dowdall and moved to Segura, La., where he will practice medicine.

—Dr. H. W. Long of Elmwood has announced his candidacy for the office of supreme medical examiner of the Mystic Workers of the World.

—Dr. C. B. Reed, Chicago, has started a crusade of extermination against the alley cat, and has enlisted the Health Department in the project.

—Dr. L. Harrison Mettler announces the removal of his office to the Columbus Memorial Building, the new number of which is 31 North State Street, Chicago.

—A $16,000 addition will be made to St. Francis Hospital at Litchfield, this season. The new addition will be on the south of the present building, full three stories high.

—The Lutheran Hospital at Granite City has been declared bankrupt, the affair involving a large amount of money, and is said to have been caused by the failure of patients to pay bills.

—The Waukegan Physicians Club has made a liberal contribution to Dr. Margaret S. Grant, who leaves in the early summer for China, where she intends to make an exhaustive study of the pneumonic plague.

—On the morning of March 27, the office and drugstore of Dr. Joseph Pogue of Edwardsville was destroyed by fire. All the valuable records accumulated during a practice of fifty years together with a complete up-to-date surgical outfit, *x*-ray machine, electrical appliances, medical library and drug stock became a total loss, only partially covered by insurance.

—For the benefit of people living in and working near the loop the Chicago Memorial Tuberculosis Sanatorium has opened a down-town dispensary at the Iroquois Memorial Hospital, Market Street, for the free examination and treatment of persons suspected of having or are actually affected with tuberculosis. The dispensary at present is opened on Tuesday evening from 7 to 9 and on Saturday from 2 to 4.

—Dr. J. F. Snyder's large museum of archeological and natural history specimens, the most valuable private collection in the state, has been sold to William J. Seever of St. Louis, and will be replaced in the Archeological Institute in that city. The collection was known to all scientific circles throughout the United States and was the basis of many archeological papers appearing in leading scientific journals. It was valued at $10,000 and has been the show place of Virginia for the past thirty-five years.

—THE DRS. SENN BRING SUIT AGAINST ST. JOSEPH'S HOSPITAL.—Emanuel J. and William N. Senn have filed petition in the Superior Court of Cook County, making certain charges regarding the use of two beds endowed by their father, the late Dr. Nicholas Senn. Dr. Senn ten years ago paid the sisters $10,000, the endowment agreement affirming that the sisters should set aside for perpetual use of said Nicholas Senn, his regular heirs, and such other persons as he from time to time designated, these beds. The agreement was continued and recognized as proper up to Jan. 1, 1911. The sisters now in charge wrote the following letter to the Senn brothers, which has brought the matter to a focus:

> Dear Sirs:—Since taking charge of St. Joseph's Hospital as Sister Superior I have been familiarizing myself with its affairs and I find that during the life time of your father, Dr. Nicholas Senn, he entered into two contracts with St. Joseph's Hospital concerning the perpetual use of two rooms therein for himself, his legal heirs, and such other persons as he might from time to time designate in writing, but the contracts do not give his heirs the privilege of designating who may occupy such rooms.
>
> It is therefore my duty to advise you that the patients who are now occupying the Senn rooms at the request of your family, are not included in the class of patients entitled to occupy the rooms under the terms of the above mentioned contracts. Yours respectfully,
>
> SISTER CAMILLA.

According to the letter of the contract these beds must remain idle except when either of the brothers is inclined to occupy the rooms. The sisters insist that this would be improvident and that the hospital should have whatever income may be derived from use of the beds.

—The Morgan County Dental Society met at Jacksonville, April 6, 1911, with Dr. Green Vardiman Black, now of Chicago, but for many years a Jacksonville resident, as their honored guest. While the gather-

ing was primarily for the dentists of this and neighboring counties, added importance was given the event by the presence of Dr. Noyes of Chicago and Dr. E. R. Wedelsteadt of St. Paul, Minn. In the afternoon a meeting was held at 349 East State Street, the house where Dr. Black had his home for nearly thirty years and his offices for a long period. After a social hour, Dr. G. V. Black began an informal lecture illustrated with stereopticon views on "The Formation of Calculi," which proved to be of exceptional interest and aid to his auditors, presenting as he did many matters entirely new to them. At 8 o'clock a company of eighty sat down to the banquet tables arranged in the dining-room of the Dunlap. Beside dentists and physicians the business and professional men of Jacksonville were well represented. The toastmaster of the evening was Dr. E. K. Blair, and after the excellent banquet had been served the following speakers were introduced and made eloquent response: Dr. T. W. Pritchett, "The Fraternal Spirit"; Dr. G. H. Kopperl, "Our Guest of Honor"; Dr. T. J. Pitner, "The Medical Profession"; Dr. J. W. Hairgrove, "Surgery—Past, Present and Future"; Dr. E. R. Wedelsteadt, "A Voice from the G. V. Black Club of St. Paul, Minnesota"; Dr. A. B. Morey, "As We Knew Him"; Dr. G. V. Black, "Home Again." An added feature of the program was furnished by Dr. Carl E. Black, who with the aid of the stereopticon, displayed a number of pictures, giving something of the personal history of his eminent father and some idea of the development of his work.

NEW INCORPORATIONS

—American Cancer Research Society, Chicago; to establish laboratories for the study of cancer; incorporators, L. D. Rogers, Lyman W. Rogers, Charles F. Hall.

—West Suburban Hospital Association, Oak Park; capital $25,000; maintain and operate a hospital; incorporators, W. E. Potter, F. W. Kettlestrings, Charles E. Humiston.

—Logan Square Hospital, Chicago; capital $2,500; incorporators, Frank F. Hoffman, Jacob C. Krafft, Robert E. Gentzel.

PUBLIC HEALTH

—It is right and proper to foster and protect tree life and plant life; but let us not forget human life.—*From the Bulletin, Chicago Department of Health.*

—The superintendent of the Municipal Tuberculosis Sanitarium asks that the following announcement be made:

For the benefit of persons working or living in or near the loop district the Chicago Municipal Tuberculosis Sanitarium has opened a downtown dispensary at the Iroquois Memorial Hospital, 87 Market Street. This is for free examination and treatment of persons suspected of having or actually afflicted with tuberculosis. At present the dispensary is open on Tuesday evenings, 7 to 9, and Saturday afternoons, 2 to 4, but as

soon as attendance requires it the following hours will be observed: Mondays, 9 to 11 a. m.; Tuesdays, 7 to 9 p. m.; Fridays, 7 to 9 p. m.; Saturdays, 2 to 4 p. m.—*From Bulletin, Chicago Department of Health.*

—The Department of Health laboratories, on the seventh floor of the new City Hall, Washington Street side, are now in working order. In arrangement, appointments and equipment they no doubt are unequaled—certainly not excelled—by any municipal laboratories in the country. Separate rooms, each splendidly equipped, are provided for the different branches of laboratory work. The chemical laboratories for the chemical examinations of milk, water, foodstuffs and general chemical work are in every way up to the latest standard of laboratory construction. The bacteriological division is also perfect in every detail, and with the best of facilities for taking care of bacteriological work coming within the province of a municipal laboratory to do.—*From Bulletin, Chicago Department of Health.*

—Condemnation of the public drinking cup is strenuously voiced in the *Bulletin* of the Chicago health department of April 22. In the last two weeks, it is stated, the laboratory has been engaged in the examination of these utensils taken from public schools, downtown hotels, railroad stations, department stores and a home for children. In eighteen instances pavement epithelium, the cells which form the lining of the mouth, were found adhering to the lip of the cup; diphtheria-like organisms were found in two instances; influenza bacilli in two instances; pneumococci were demonstrated six times; streptococci, five times; staphylococci, fifteen times, and micrococci catarrhalis, once.

Of several guinea-pigs inoculated with the germs from the rim of the cups, five developed abscesses, six became extremely ill and two died, one with pus infection and one with typical diphtheria.

One result of the crusade against the public drinking cup was made public when a State Street department store announced that it had abolished the public cups at the fountains in its store, and that individual drinking cups would hereafter be provided for all patrons.

—If the people of Chicago only thoroughly understood the dangers to which they are exposed by the use of impure, dirty and infected milk they would certainly unite in a vigorous demand that the most extreme measures be taken for their protection. When we know that the germs of consumption are concealed in all dairy products that come from tuberculous cows we should certainly demand that all such products be condemned as unfit for use as food.

We would not permit the baker to put strychnin or any other poisonous substance in his bread. Neither should we permit the dairyman to poison his milk. Moreover, if the bakers of Chicago have been compelled to build and maintain clean, sanitary bakeries, why should not the dairymen be compelled to instal and maintain the highest standards of sanitation in the production of milk?

This question of clean, safe milk is of vital importance to the people of Chicago. It rises far above the question of dollars and cents. It can be settled in but one way, and that is that the producers and handlers

of milk must meet all the requirements that are shown to be necessary for the proper safeguarding of the public health.—*From Bulletin, Chicago Department of Health.*

—The Quadrennial Report of the Chicago Department of Health just issued covers the administration of the department by Dr. W. A. Evans as commissioner of health. In addition to the usual record of the activities of the department it contains full descriptions of the methods used and may be termed a hand book of health administration. It also has a series of articles by the commissioner on various features of health work. A full set of cuts of the posters, diagrams, spot maps and other educational features that have formed such a striking part of Dr. Evans' work is included. Carrying out the hand book idea it also has an index for ready reference. Many of the "healthgrams" that have appeared from time to time in the *Bulletin* are inserted.

The *Bulletin* of April 15 contained the following valedictory of Dr. Evans:

"TO THE PUBLIC

"When, in 1907, I assumed responsibility for the Health Department, I wrote that the work had been evolving; my predecessors had brought it up to a certain point and that I would try to build still further. I think that the reputation of the Department throughout the world, the growth of the older activities of the Department and development of new activities, the greater security of the people and a better food and air supply, and a greater public interest in health, are further steps in that evolution. Perhaps most significant of all, the Department is incorporated as, and in truth is, a school of sanitary instruction. Here, too, there is evolution, since the nucleus of it was this bulletin, begun by Drs. Reynolds and Reilly. I am steadfast in the hope and I assure the public of my belief that my successor will continue this evolution, fighting off the few in the interest of the great, needful mass.

"And now I wish to say in sincerity that the results accomplished have been due to the brains, energy and faith of the men in charge of bureaus, and the men and women under them; to the vision and the courage of the mayor; to the cooperation of other departments of the city government; to the city council, which has passed every important ordinance asked of it, save one—that requiring that milk should be kept cold.

"And, finally, I join with the community in wishing the incoming commissioner of health large results from his labors.

"W. A. EVANS."

—Universal recognition of conditions that are bad, as a rule, leads to their being made better. A few persons in a community may agitate and rail against evils that need correcting, but it is not until there is an aroused and practically unanimous public sentiment against them that real reform and betterment become accomplished facts.

So, if people generally realized the tremendous cost put on them by the communicable diseases, there would speedily be more intelligent and aggressive cooperation on their part with health officials in controlling and preventing epidemics of every kind.

Everyone knows that, aside from all other considerations, sickness is expensive and a terrible drain on his financial resources. But because this knowledge has not as yet crystallized into a sweeping public sentiment, or conviction, we might say, health laws and regulations are not appreciated at their full value and are not obeyed in the spirit that would make them of greatest value to the community. Here are some figures that will help us to better understand the cost of contagion. It has been estimated that the average case cost of the principal communicable diseases is as follows: diphtheria, $200 to $500; scarlet fever, $250 to $2,000; whooping cough, $150 to $1,000; measles, $100 to $500. Taking the minimum figures, let us see what the people of Chicago were compelled to pay for the four principal contagious diseases in 1910.

Diphtheria cases	7,961	@	$200 —	$1,592,200
Scarlet fever	6,427	@	250 —	1,606,750
Measles	10,920	@	100 —	1,092,000
Whooping cough	2,552	@	150 —	382,800
Total				$4,673,750

The figures used are for average case cost from onset to termination of the disease, including the average, also covering recovery or death as the final outcome. The maximum figures are, no doubt, intended to apply to cases where the families are in good circumstances and are lavish, even reckless in the money spent for both the comfort and care of the sick.

It is, however, certain that the figures representing mimimum cost are conservative and approximately represent the actual money cost to the people of Chicago on account of the communicable diseases named. It might be added that if only 10 per cent. of this $4,673,750 could be had with which to fight contagion and to carry on a city-wide campaign of education and preventive work it would doubtless prove to be a most profitable investment both from the health and economic standpoints.—*From Bulletin, Chicago Department of Health.*

—The series of consumption articles is concluded with this contribution, which is much the least important of the series.

What are the conditions of the human body which make it easy to catch consumption? This is a question about which we know very little and about which we can say very little in an affirmative way. There are, however, certain negative things which should be said, viz.: A man is susceptible to disease if he is liable to "catch" it when brought in contact with the germ of that disease. A man is immune when he can come in contact with the germ of a disease and not "catch" the disease.

For many diseases we know all about the factors which make for immunity on the one hand and susceptibility on the other. With respect to consumption we know very little. For instance, a physical giant coming down with consumption is not a rare sight. Good, robust health does not prevent it; probably it even does not make against it. Invalids are no more susceptible to it than other people. Perhaps they are less so. There seems to be no relation between consumption and other diseases.

When you are recovering from one disease you are no more liable to contract consumption than at any other time. Perhaps you may be less liable, inasmuch as you are likely to be spending your time more out of doors in the sunshine and pure air and less in contact with diseased people and bad places. Being "weak" and "run down" does not predispose to consumption. The man who is "weak" and "run down" and who finds that he has consumption, is in that debilitated condition because of his consumption—the consumption is not the result of his condition.

No other disease "runs into consumption." When a man thinks that his typhoid or his pneumonia has "run into consumption" he is wrong. He had consumption from the start but was slow in finding it out. Consumption starts a long time before a man coughs up sputum with the germs of the disease in it. A diagnosis made from the findings of tuberculosis bacilli in the sputum is a dangerously late diagnosis.

Consumption is not inherited. The little tendency to it which may be inherited is so slight that it may be easily overcome. Probably we inherit more of poor chest capacity—tendency to pigeon breast—than we do of consumption. Right living should easily overcome that.

Between the cradle and the grave every man can expect to breathe or swallow some living consumption germs. How can we be spared the disease? Here's the way:

1. Avoid careless consumptives.
2. Avoid food from consumptive animals.
3. Avoid dusty places.
4. Avoid foul air.
5. Avoid human "jams."
6. Live in the sunshine as much as possible.
7. Live in the fresh, blowing air as much as possible.
8. Unhouse yourself as much as possible.
9. Build up your resistance by dressing lightly, exposing yourself to cold, living in cold rooms—the reverse of coddling yourself. (This applies to children and adults up to the age of 60 years. Old men and women must lead more sheltered lives.)
10. Have yourself examined from time to time to discover latent or semi-latent disease.—*From Bulletin, Chicago Department of Health.*

HEALTH HINTS

Good air means good work.

Educate the mother and save the child.

In saving the child you are saving the state.

Defective sanitation means a defective civilization.

The common drinking-cup is a common nuisance and should be abolished.

If anyone hands you a lemon, make lemonade of it. It is both healthful and pleasant to take.

Bad air and a high temperature in the schoolroom are certain to produce a low grade of scholarship in the pupils.

If factory or workshop surroundings are clean and healthful the output will most likely be large in quantity and high in quality.—*From Bulletin, Chicago Department of Health.*

DEATHS

DR. JOHN HOLIN died at his home in Cowden March 18, 1911, from pneumonia, aged 65.

JOHN O'FARRALL, M.D., Cincinnati College of Medicine and Surgery, 1863; died at his home in Danville, Ill., March 7, from nephritis, aged 74.

GEORGE W. ANDREWS, M.D., Western Reserve University, Cleveland, Ohio, 1875; died at his home in Ramsey, Ill., March 10, from pneumonia, aged 59.

NORMAN O. GREER, M.D., St. Louis College of Physicians and Surgeons, 1904; of Dupo, Ill.; died in a hospital in St. Louis, March 30, after an operation for appendicitis, aged 38.

COLUMBUS V. MASSEY, M.D., American Medical College, Eclectic, St. Louis, 1878; a member of the American Medical Association; died at his home in Chicago, March 20, from heart disease, aged 62.

JOEL ALLEN (license years of practice, Illinois, 1877); surgeon of the Seventy-Seventh Illinois Volunteer Infantry during the Civil War; died at his home in Pontiac, March 9, from influenza, aged 83.

HARRISON ANDREW LYDING, M.D., Rush Medical College, 1910; of Chicago; an intern at Michael Reese Hospital; died in that institution, March 20, from scarlet fever contracted from a patient, aged 23.

THOMAS F. O'MALLEY, M.D., Rush Medical College, 1886; a member of the Illinois State Medical Society; who in his young manhood studied for the priesthood in Ireland but was never ordained; from 1892 to 1899 chief medical examiner of the Catholic Order of Foresters; died at his home in Chicago, March 19, from pneumonia, aged 50.

R. W. REASONER, M.D., for a number of years a practitioner of Morrisonville, was killed by a foot-pad at Colorado Springs, April 14, 1911. Dr. Reasoner went to Colorado Springs about ten years ago because of his wife's health, and remained practicing there up to the time of his death. It will be remembered Dr. Reasoner while practicing in Morrisonville was shot by an insane person, and narrowly escaped death. He is survived by a brother, who is a surgeon in the United States Army, and his father, of this state.

HENRY GRADLE, a pioneer ophthalmologist and otologist of Chicago, a lifelong student and scientist, died at his winter home in Santa Barbara, Cal., April 4, from carcinoma of the bladder, aged 55. He was born in Frankfort-on-the-Main, Germany, came to Chicago when a young child, and received his education there. He graduated from Chicago Medical College in the class of 1874, and at once began practice of his specialty. From 1879 to 1883 he was professor of physiology in his alma mater, and since 1898 has been professor of diseases of the eye and ear. His society membership included the American Medical Association, Heidelberg Ophthalmologic Society, Chicago Ophthalmological Society, and Chicago Laryngological Society. He was attending eye and ear surgeon to Wesley Hospital, and consulting eye and ear surgeon to Mercy Hospital. He was a frequent contributor to the periodicals dealing with his specialty. He was also the author of "Bacteria and the Germ Theory

of Disease," which appeared in 1883, and a "Text-Book on Diseases of the Nose, Pharynx and Ear," which was published eight years later.

FRANK ANTHONY, M.D., Rush Medical College, 1881; one of the most esteemed and best beloved practitioners of northern Illinois, died in Augustana Hospital, Chicago, April 8, from cirrhosis of the liver, aged 53. After his graduation Dr. Anthony returned to his home city, Sterling, where he practiced with his father and later succeeded to his practice. He was a member of the American Medical Association, American Association of Railway Surgeons, Association of Military Surgeons of the United States, Western Surgical and Gynecological Association, and was at one time president of the Whiteside County Medical Society. He was local surgeon to the Chicago and Northwestern Railway for more than twenty years, and was also surgeon to the Sterling, Dixon and Eastern Electric Railway Co. Dr. Anthony was one of the pioneer members of the medical department of the National Guard, and was for many years a major and surgeon of the Sixth Infantry. He served throughout the Spanish American War as major and surgeon of the Sixth Illinois Infantry, U. S. V., in Porto Rico. He had also served the city of Sterling as health officer and Whiteside County as county physician. While he claimed to be nothing more than a country practitioner, Dr. Anthony was a surgeon and gynecologist of no mean ability. In addition to being a physician and surgeon of high attainments, Dr. Anthony had a most lovable personality and his death means a distinct personal loss to his many friends.

Book Notices.

PLASTIC AND COSMETIC SURGERY. By Frederick Strange Kolle, M.D., Fellow of New York Academy of Medicine; member of Deutsche Medezinische Gesellschaft, N. Y., Kings County Hospital Alumni Society, Author's Committee American Health League, Physicians' Legislature League, etc.; Author of "The X-Rays: Their Production and Application," "Medico-Surgical Radiography," "Subcutaneous Hydrocarbon Protheses," etc. With one colored plate and 522 illustrations in text. New York and London. D. Appleton and Company, 1911.

This thoroughly practical and concise treatise on Plastic and Cosmetic Surgery places in the hands of the profession an actual need which is being neglected. The work has to do mostly with deformities of the head and face, all of which are taken up in a thorough and systematic manner, and much new information is imparted. The only criticism we have to make is the insertion of pages two, three and four. Surely at this day and age of the world to reiterate in every surgical work the primary principles, otherwise the work is above all praise and should have a wide circulation.

PRACTICAL TREATMENT: Volume 1. A Handbook of Practical Treatment. In three volumes. By seventy-nine eminent specialists. Edited by John H. Musser, M.D., Professor of Clinical Medicine, University of Pennsylvania; and A. O. J. Kelly, M.D., Assistant Professor of Medicine, University of Pennsylvania. Octavo of 909 pages, illustrated. Philadelphia and London; W. B. Saunders Company, 1911. Per volume: cloth, $6.00 net; half morocco, $7.50 net.

This the most ambitious work on practical treatment ever undertaken in America is well worthy of special consideration. All the best therapeutists of England and America have contributed to it. Among these we mention Drs.

Hektoen and Sippy of Chicago; Drs. Charles H. and William J. Mayo of Rochester, and Dr. George Dock of St. Louis. It is unfortunate that our Osteopathic brethren can not have access to this work, which among other things takes up quite thoroughly the subject of exercise and massage and mechano-therapy, in fact all methods of treatment are to be considered in this monumental work. Especially unfortunate is the death of Dr. A. O. J. Kelly, one of the editors, but it is probable that it was so far advanced at the time of his death that the work will lose none of its value by this unfortunate circumstance. We recommend the work in highest terms. There are to be three volumes, each of 900 pages.

A TEXT-BOOK OF BACTERIOLOGY. A Practical Treatise for Students and Practitioners of Medicine. By Philip Hanson Hiss, Jr., M.D., Professor of Bacteriology, College of Physicians and Surgeons, Columbia University, New York City, and Hans Zinsser, M.D., Associate Professor in charge of Bacteriology Leland Stanford, Jr., University, Palo Alto, California. D. Appleton and Company, Publishers.

This work of 750 pages is devoted to the fundamental laws and technique of Bacteriology as illustrated by their application to the study of pathogenic bacteria. It has been the endeavor of the authors to present the subject in as broad and critical a manner as possible in dealing with infection and immunity and with methods of biologic diagnosis and treatment of disease, so that the student and practitioner of medicine, by becoming familfar with underlying laws and principles, may not only be in a position to realize the meaning and scope of some of these newer discoveries and methods, but may be in better position to decide for themselves their proper application and limitation.

"The scope and arrangement of subjects treated of in this book are the direct outcome of many years of experience in the instruction of students in medical and advanced university courses in bacteriology, and it is our hope that this volume may not only meet the needs of such students but may prove of value to the practitioner of medicine for whom it has also been written."

For the student some such work as this is absolutely necessary and for the general practitioner it offers the nearest means of bringing his knowledge of bacteriology up to date.

DIAGNOSIS OF SYPHILIS. By George E. Malsbary, M.D., Professor of Medicine, Cincinnati Polyclinic and Post-Graduate School.

Dr. Malsbary's work on one of the most important diseases with which the profession has to deal, comes at a very fortunate time when the attention of the whole profession of the world, and the whole world for that matter, has been directed to the diagnosis, treatment and suppression of this terrible scourge. The text book is complete in every way, and especially rich is the bibliography bearing on the diagnosis of Syphilis which covers 106 pages, and from the literature of all the civilized countries. We do not quite understand why all the bibliography in other parts of the work is not included under the one heading. There are a few typographical errors through the work which, however, does not in any way obscure the sense. It seems to us that the name of the organism which causes syphilis should always be spelled in the same way, whether in italics or not. On page 195 the text reads "supraneal" when evidently suprarenal bodies are intended. The differential diagnosis from tuberculosis, cancer and other diseases is fully developed. We quote from the preface:

"In this work the subject is considered from various standpoints. First, attention is paid to laboratory diagnosis, special stress being placed on the methods of recognition of the spirochete pallida, and the technic and relative value of the Wassermann and other tests. Second, hereditary syphilis has received ample consideration. Third, the acquired form of syphilis is discussed in its various stages. Fourth, the syphilitic affections of the various organs have received detailed description. Fifth, there is appended an extensive recent bibliography bearing upon the subject."

This work can be confidentily recommended to all our readers as being an epitome of this disease completely brought up to date.